Campus Computing News

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By John Hooper, Chief Information Officer, University Information Technology

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Read more

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By Joe Sprague, Instructional Technology Support Manager, CLEAR

The CLEAR Faculty Help Desk is here to provide technical support for Blackboard and its supported add-ons to faculty and staff at the University of North Texas - Denton/Dallas.

Read more

Information Technology Resources at UNT - Finding Your Way Around

By Claudia Lynch, Benchmarks Online Editor
Welcome, or welcome back, to UNT! If you're new, or if you've just been away for a while, it is our hope that this article will serve as a handy starting point to get you acquainted (or re-acquainted) with the resources that are available to you here at the University.

UNT Information Technology Resolutions for 2014

By Dr. Elizabeth Hinkle-Turner, Director - Academic Computing Technical Services

In 2007 I made a New Year's resolution to start studying karate because it looked like my two sons were having so much fun in their class that I wanted to try it out! Anyone who knows me well knows that I am the type of person who does not stop before finishing a goal and - indeed - I now enjoy my "non UNT work life" as a karate instructor and all-around ninja! This year I have been a little late on making my resolutions and maybe you are late to this task as well.

Click on the link above for an information age laugh.

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Have questions on content or technical issues? Please contact us.
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old telephone service ("POTS") and $90 per semester if you want ISDN service at 128Kb/sec. At the end of March there were 1200 subscribers in Denton and 276 in Dallas/Ft. Worth (out of the 329 subscriptions available there.)
WIFI Expansion Project Underway

By John Hooper, Chief Information Officer, University Information Technology

University IT, in collaboration with the UNT Systems IT Shared Services division, has begun a project to enhance WIFI on the UNT campus. The project will provide the campus with more wireless connectivity and bandwidth to meet the growing needs of UNT students and faculty.

The nearly $3M project will take two years to complete and will more than triple the number of wireless access points installed across campus. Nearly 1,400 wireless access points (APs) will be added to the existing 600 APs currently installed on campus. Additionally, monitors will be added to the network to aid in detection of unauthorized wireless systems that will interfere with the WIFI network operating on campus.

Students first!

To meet the needs of our students first, the initial phases of the project will concentrate on academic spaces. The first installations have begun in Sage Hall. Enhancements will also be completed in other buildings by the end of the spring semester including the Auditorium, General Academic, Hickory, Wooten, Art, Chilton, Music, and the Willis Library. More academic spaces as well as some outdoor areas will be completed by the end of the fall 2014 semester.

Wireless devices on the rise

Over the last five years UNT has seen a significant growth of wireless devices on the UNT campus. Wireless devices include laptops, tablets, handheld phones and other devices such as ticket scanners, UNT ID card scanners for various student venues, book scanning for the library, Apple TV's for classroom instruction, robots for research projects, wireless printing on campus and wireless controllers for power management, irrigation and HVAC systems.

The number of wireless devices on the UNT campus has grown explosively. From 2008 to 2012 the number of unique wireless devices attaching to the UNT network grew from under 40,000 to more than 130,000. Students are a mobile population. According to the EDUCAUSE Center for Analysis and Research (ECAR) Study of Undergraduate Students and Information Technology 2013, about 90% of students own laptop computers. 75% own smart phones, and the number of tablets owned by students appears to have doubled over the last year, approaching 35%. That student walking across the UNT campus likely has 2 or more active WIFI devices in their backpack.

Anytime, Anywhere Access

A good wireless infrastructure for higher education with adequate coverage and capacity facilitates more collaborative and open learning environments. Fueled by the explosive adoption of mobile devices among students and faculty, instructors can complement classroom instruction with on-line activities to create an integrated learning experience.

With anytime, anywhere access to resources, students can conduct schoolwork in unconventional settings—the campus quad, student center, library and other places around the campus. The traditional campus labs are being complemented today by collaborative spaces where adequate wireless coverage, capacities and power are available.
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University Information Technology as well as other UNT campus IT support groups are in the process of implementing a new IT Service portfolio managed by UNT System IT Shared Services. As recently announced, the system supports the creation and tracking of IT service and support requests and replaces the BMC Remedy system that had been in use for many years.

The University IT Services section of the new service management tool and IT Help self-service portal To report a problem or request a specific IT service, members of the UNT community can visit ithelp.unt.edu and log on with their EUID and password. Once logged in, one can either:

- click on the "report an issue" button in the top right of the window
- select "Request Help from your IT Support Group"
- browse the support categories
- search for a particular support category

UNT IT staff are working with ITSS to continue to refine and improve access to these support requests.

IT support continues to be available directly from your local IT staff or via the UIT Helpdesk. For help getting the appropriate support, you can contact the UIT Helpdesk directly at 940-565-2324 or helpdesk@unt.edu. You can also visit the UIT Helpdesk webpage for access to IT support resources and information.

Originally published January 2014 -- Please note that information in Benchmarks Online is likely to degrade over time, especially links to various Websites. To make sure you have the most current information on a specific topic, it may be best to navigate that UNT Website or consult the UNT Helpdesk/ http://www.unt.edu/helpdesk/. Questions and comments should be directed to benchmarks@unt.edu.
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The CLEAR Faculty Help Desk

By Joe Sprague, Instructional Technology Support Manager, CLEAR

The CLEAR Faculty Help Desk is here to provide technical support for Blackboard and its supported add-ons to faculty and staff at the University of North Texas - Denton/Dallas. Our scope of support ranges from how-to questions, such as how to enroll your teaching assistant into Blackboard, to technical problems, such as investigating an error you are receiving while trying to export your grade center. We can be reached by email, phone, and in-person. Detailed below is our contact information and support hours for the Spring 2014 semester. We look forward to assisting you.

Contact Information:
Email: clearhelp@unt.edu
Phone: 940-369-7394
Walk-In: Chilton Hall, Room 112C

Spring 2014 Hours:
Monday - Thursday: 8:00 a.m. - 9:00 p.m.
Friday: 8:00 a.m. - 5:00 p.m.
Saturday: 11:00 a.m. - 3:00 p.m.
Sunday: Closed

Visit the CLEAR Faculty Help Desk for announcements, tutorials, & other support resources.

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Welcome, or welcome back, to UNT! If you're new, or if you've just been away for a while, it is our hope that this article will serve as a handy starting point to get you acquainted (or re-acquainted) with the resources that are available to you here at the University.

Students, faculty and/or staff members should all benefit from the information that follows.

Many IT services at UNT are brought to you by University Information Technology (UIT). UIT consists of local IT services associated with the UNT flagship campus. These are Academic Computing and User Services (ACUS), Administrative Information Technology Services (AITS), Classroom Support Services (CSS), and Microcomputer Maintenance Services (MMS). System-wide IT services are provided by Information Technology Shared Services (ITSS). These areas were all part of the Computing and Information Technology Center (CITC) until the summer of 2011 and because of that you may still see that name in documentation and be referred to parts of the CITC website.

When all else fails ...

If you have an IT question and/or problem and can't think of who to contact or where to look for a solution, just remember this: Contact the Helpdesk

The University Information Technology (UIT) Helpdesk is located in room 130 of Sage Hall. Their hours are listed on the Helpdesk website: http://helpdesk.unt.edu/. Besides stopping by or searching for answers on the website, you can call the Helpdesk at 940-565-2324 or send mail to helpdesk@unt.edu.

Speaking of the Helpdesk, Benchmarks Online, publishes a column each month called "Helpdesk FYI." This month's article is How to tell if your account is locked. Following is a selection of articles published within the past year. Perhaps one of these topics is something you've been wondering about:

- Howdy! How can I help you?
- EagleConnect Wave 15 Upgrade completed
- Be Safe Out There
- Office Web Apps and SkyDrive
- Zip-File Attachment Quarantine
- Setting up Outlook 2010 or 2013 on Windows 8
- UNT wireless network connection
- Filtering your UNT Email
- UNT Bulk Mail Message Type

Also, you can look back through the Benchmarks Online archives for more articles that may be of interest to you.

We hope that new students are familiar with the Student Tour of Computing Services at UNT. There are lots of topics touched on that are of interest to non-students also. For Example, in the Documents About Student Computing Services area are PDF files of things like a Computer Security brochure and a General Access Computer Lab...
General Access Computer Lab System

The UNT General Access Computer Lab System is a collection of 13 computer labs spread across the UNT Denton campus. They have been set up to provide computing to the University community. The GACL website states:

The labs are intended to meet the general academic computing needs of UNT students. These labs are supported and maintained primarily through a portion of the Technology Use Fee.

Students with a valid UNT photo ID card may use any General Access Lab except where noted.

A list of labs and their locations and operating hours is available from the GACL website. The lab in SYMR 104 is an Adaptive Lab. As the website states:

The University of North Texas Academic Computing Services General Access Lab is located in Sycamore Hall, Room 104. The mission of this lab is to provide general services to the UNT community with an emphasis on the special features that Academic Computing Services has to offer including helpdesk support and research assistance. Additionally the ACS lab is the designated adaptive lab on campus providing state-of-the-art adaptive equipment for those who need it. For more information about adaptive services on the UNT campus visit the Office of Disability Accommodation at http://www.unt.edu/oda.

Computer Based Training

Rising costs of training, shrinking budgets and changing technology have contributed to changes in computer-based training offerings at UNT over the last several years. The monthly "Training" column in Benchmarks Online has a list of training resources currently available to the UNT community. The Microsoft IT Academy is a program that provides all students, faculty and staff of the UNT System -- UNT, UNT Health Science Center, and UNT Dallas -- access to online learning. Additionally, the Business Service Center Training & Development area provides a link to download Office 2010 training (in PowerPoint 2010 format). Contact Claudia Lynch if you have questions or need more information about these resources.

Online Learning

For students, a good starting place is found on the student tour. Faculty will want to visit the Center for Learning Enhancement, Assessment, and Redesign (CLEAR) website and/or the Center itself.

Other Items of Interest

- **Online Student Health Portal (OSH)** -- OSH is a web-based portal connecting students to the Student Health and Wellness Center (SHWC) 24 hours a day, 7 days a week.

- **Videoconferencing** -- Videoconference Technology allows you to meet with your colleagues on campus, at the Dallas and Ft. Worth campuses, or almost anywhere in the world. See the Benchmarks Online article "Save Time, Money, and Avoid Parking Frustrations Using Videoconference Technology" for further information.

- **Ask Us** - The UNT Libraries' virtual/online help services; they're available from your computer 24/7.

- **Info~Tech** -- Info-Tech Research Group (Info~Tech) is the Information Technology (IT) research partner for the UNT System. All faculty, staff, and students system-wide have access to Info-Tech research at: www.infotech.unt.edu (select the UNT System name to login).

- **Campus Subscription to Higher Education Newsletters** -- UNT has negotiated a group online subscription allowing campus members free access to the Online Classroom & The Teaching Professor higher education newsletters produced by Magna Publications. To access these publications, go to http://www.magnapubs.com/publications/newsletters/ and click on the appropriate icon. No password is necessary to access either publication from a campus computer. Click on the "Access my Subscription" button and you will be taken to the current newsletter. If you wish to access from off campus or if you would like to receive an email message each time a new issue is posted, you will need to register and enter a campus voucher code and pin number. Please email jane.himmel@unt.edu to obtain this information.

- **Statistical and Research Support Services** -- "The mission of the Research and Statistical Support (RSS) group at the University of North Texas (UNT) is to facilitate access to current research tools and statistical methodologies and to promote these methods to the research, instructional, and administrative communities at UNT; to encourage a collaborative research environment for researchers through the development and use of innovative computing technologies; to provide training and consultation in the
appropriate use of statistical methodologies and computer software; and to facilitate access to data collection and data management technologies.” [From the Research and Statistical Support website]. The RSS Group publishes a monthly column in Benchmarks Online. You can find their brochure here.

- **LISTSERV.UNT.EDU** -- Listserv web interface makes it much easier to manage your listserv lists. See this past Benchmarks Online article for more information.

- **Data Management Services** - Location: Sage Hall, Room 336, near to the Sage Hall elevator. For more information contact: Joann.Luksich@unt.edu 940.369.7416. Services include:
  
  | Exam Grading and Analysis |
  | Research Projects - Data Collection |
  | Scannable Survey Design |
  |
  | **Faculty Evaluation Processing**: Scan, edit and process UNT departmental faculty evaluations. Standardized reports provided: Department Overall, By Instructor-Course-Section, and By Instructor. An Excel data file will be provided to run any customized reports desired. See Faculty Evaluation Processing Tips for more information. |

- **High-Performance Computing Initiative** - The High-Performance Computing Initiative is available for use by UNT researchers whose research or scholarship requires use of computationally-intensive applications. Visit the HPD website for further information. See also this recent article in Benchmarks Online: High Performance Computing: Talon 2.0.

- **Information Security** -- "The Information Security Team helps protect UNT Information Technology assets from misuse, abuse, and unauthorized access. The mission of the Information Security Team is to assist and collaborate with UNT administrative, academic, and student communities to help assess, implement, and maintain information security needs.” [From the Information Security Website]. Links and further information can be found at that site. UNT Faculty, Staff, and Students are required to read the Security Handbook. Information Security has an announcement board on UNTRANET to post important security updates/alerts as an additional security resource. See this past Benchmarks Online article for further information on the announcement board.

- **Managing Spam** -- Actively manage e-mail that is sent to your campus e-mail address. See the article Managing Your Spam for more information.

- **Campus VPN** -- The Campus VPN is an interface that will allow you to connect remotely to on-campus resources. For more information click here.

- **Free or cheap software**
  
  - **McAfee VirusScan 8.8i** -- Free download.
  
  - **Free Office Web Apps** -- Read all about it here.

  - **Microsoft Campus Agreement** -- UNT has had an agreement with Microsoft for a number of years that allows us to distribute various Microsoft products to employees of the University. According to the agreement, you can "use the software for school-related purposes on a personally-owned computer or an institution-owned computer designated for your exclusive use" and you must remove the software from your home machine if you leave UNT. This agreement does not cover students unless those students are also UNT employees. UNT Health Science Center employees CAN purchase their software on the HSC campus via the ITS Helpdesk. Employees wishing to install these products on University-owned computers should contact their Network Manager for further instructions.

  - **The Microsoft Home Use Program** -- Reduced price software for faculty/staff home use. Visit the Home Use Program website to participate in the program. If you are unable to order the software from there, contact Claudia Lynch, at lynch@unt.edu.
- Adobe's "Master Collection" and "Design & Web Premium" suites are now available for faculty and staff use at home via a "work at home" license agreement negotiated between UNT and Adobe. See this Benchmarks Online article for more information.

- DreamSpark -- UNT students can take advantage of DreamSpark, Microsoft's program that provides free development software to students. Click here for more information.

- Free/Open Source software -- Two articles on that topic from the RSS staff:

  1. Free ! = Cheap: Open Source and/or Free Alternatives in Statistical Analysis.

  2. Free your research: Open source and other alternatives to cut your costs and improve productivity as a graduate student.

*Various versions of this article are published each semester. -- Ed.*
Big Data -- Big Problem

In recent years, reports of unauthorized access to personal or financial data have become unfortunately commonplace. Generally, this happens when miscreants gain access to collections of customer or business data by finding a way to access corporate or institutional computer servers via their network connections. Most organizations (including UNT) have realized the importance of online security for any sensitive or financial data they hold and have taken multiple measures to protect such data. But, these kind of security breaches are just the tip of an iceberg of vulnerability that floats in a sea of data aggregation.

The power of the Internet

Just recently we were reminded of the power of the Internet when Target stores reported that information from 40 to 70 million credit and debit cards were stolen via transactions that happened at their retail locations during the 2013 holiday shopping season. The Target breach was actually an aggregation of data that was acquired at its point of sale computers (the things that replaced cash registers) in its stores. Someone or some group had managed to install malware on those (Windows) computers that captured the card information before it could be encrypted for transmission to the server that actually processes the transaction. Apparently, the Target breach extended beyond the point of sale data and may have compromised sales information from 10 years back or more. And lest we believe that only us plebeians are subject to such hazards, follow-on news indicates that high-end retailer Nieman Marcus suffered a similar breach of its customer's card data.

If this retail peril is not enough, we are in the midst of a national discussion regarding the activities of the National Security Agency (NSA) that include collecting and analyzing a massive amount of telephone metadata as well as intercepting large amounts of Internet traffic. This large data collection creates an unprecedented capability for monitoring citizens' communications, travel, and behavior, all under the cover of spy-level secrecy. Should the NSA be trusted? As the Washington Post recently blogged, "the agency expects the American people to simply trust it to use its vast spying powers responsibly."

Tracking your living habits?!

Consider also, the case of the Nest thermostat, a device invented by a couple of Apple engineers. It is an Internet-connected "smart" device that learns your habits and eventually automatically adjusts for when you are awake or asleep, and at home or away. As Wired has written, "Now that is has invaded thousands of homes with its smart device and gathered data about its customers' climate and living habits, Nest can begin using its powers in a new way." The new way is to allow "Nest to micro-manage the air-conditioning so that it runs as little as possible during [an electricity] demand spike." So, there is now a device that you install in your home that can not only track and store information about your personal habits, but can also allow external control of your HVAC system. But wait, this story gets better. The Nest company was recently purchased by Google. That's right -- the company that already has your e-mail, photos, online documents, and search history, now can track your living habits as well.

Outstanding ethical issues ...

The convergence of universal Internet connectivity, online transaction processing, and inexpensive data storage has the potential to turn our Internet information dream into a dystopian privacy nightmare. As Michael McFarland writes,
"The capability the computer gives of being able to assemble these seemingly innocent and insignificant facts into a comprehensive personal profile and to make it widely available gives that information a different significance. Even though limited groups of people may have legitimate reasons to have access to some of those facts for specific purposes, when the facts are all put together into a dossier they become much more personal and invasive." Oboler, Welsh, and Cruz state, "Without a resolution to outstanding ethical issues on data storage, access and use by actors in a variety of different roles, advancements in computational social science may put the public at increased risk." It seems that we've created the technology of data aggregation without much understanding or even consideration of the ethics and impact of its use.

I suppose it's too late to bring back pay phones, printed encyclopedias, dumb power grids, and cash transactions. It would seem that this would be the time for some reasoned debate to determine some reasonable legislation to protect individual privacy in this age of aggregate data. However, today's U.S. legislative climate would seem to exhaust any hope of reason. At least we can be assured by the fact there's no way that anyone could hope to sell 70 million credit card numbers. Of course, if you can write a computer program to steal 70 million credit cards, you can probably write a program to use a large number of them. Does it seem a little hot in here?
You have a unique opportunity to be a part of the planning process for Information Technology at UNT. As stated in the October, 2013 issue of Benchmarks Online, "The UNT IT Strategic Plan will provide direction for IT infrastructure, resources, service delivery, and funding allocation from the 2014-15 through the 2017-18 fiscal years." The following links are provided on the Strategic Planning website:

- The "Provide your input" link on the strategic plan page launches a "crowd sourcing" activity that enumerates identified IT themes and provides an opportunity for suggestions of UNT learning, research, and creative activities that should be priorities when considering resource planning.

- The "Track our Progress" link will provide an overview of the activities supporting the planning process as well as provide links to some of the resource information developed as a result of those activities (login may be required.)

Suggestions for additions to this site are welcome. We hope that this will be a useful resource for those interested in staying informed about the UNT IT strategic planning process.

**University Information Technology Strategic Planning:**

http://it.unt.edu/strategicplan

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How to tell if your account is locked

The first sign that your account is locked is that you are suddenly unable to log into multiple UNT websites using the correct password.

To verify that your account is locked, you will need to visit the Account Management System at ams.unt.edu. Once there, log in using your current EUID & password.

- If you are unable to log-in, you will need to reset your password.
- If you are able to log-in, you will need to verify that your account is locked.

What Systems will deny access to a locked account?

A locked account will prevent use of

- UNT eCampus (Blackboard Vista)
- MyUNT
- EIS
- EagleNet or "UNT" WI-Fi networks
- Remedy
- UNT web sites, including library electronic resources
- Internet kiosks

All of these systems use the same password system.

Unlocking a locked account

After logging into AMS, you will see your account information. If your account is locked, you should see a red dialog box with the following error message, "Your account automatically locked out due to excessive login failures. Do not change your password. View lockout details to see more information."

To fix this look for the Account Lockout item and click details, or click lockout details from inside the error message.

On the Account Lockout Status page, you will see information on the status of your account. You will also see the Clear Lockout Now button. Please be sure to read all instructions to avoid relocking your account. Once you have read the instructions, and followed them, click Clear Lockout Now. Failure to follow instructions for removing an old password, will cause account to become locked again.

You will now be directed back to the Account Lockout Status page, where you should see that "Your account is not locked." You should no be able to log into UNT websites again.
Why is my account locked?

Your account can become locked due to too many failed log-in attempts at UNT websites. Most often this is caused due to not changing a stored password in an application that is automatically trying to reconnect to a UNT service.

From the AMS website:

Mobile electronic devices that remember your Wi-Fi password are by far the most common cause of account lockouts. Did you change your password recently? Did you forget to update your mobile device with your new password? Mobile devices will automatically attempt to connect to the "UNT" Wi-Fi network with your old password that is saved in the device.

If your account is locked, check the Wi-Fi settings for any devices you have with you on campus today. Such devices include:

- Apple iOS mobile devices (iPhone, iPad, iPod touch)
- Android phones and tablets with Wi-Fi
- laptops with Wi-Fi
- any device with Wi-Fi capability

You need to make your device forget the settings for the "UNT" Wi-Fi network. Doing so will force the device to ask for your password again.

**I have followed these instructions, but my account continues to be locked.**

If you have followed all of the above instructions, and your account is relocking after unlocking it please contact the **UIT Helpdesk**.

**Certain UNT systems are unaffected by account locks**

EagleConnect (student/alumni) mailboxes use another password system. If you are unable to access your EagleConnect mailbox, please contact the UNT UIT Helpdesk.

Employee mailboxes on Microsoft Exchange (accessible via Outlook or [https://webmail.unt.edu](https://webmail.unt.edu)) and Microsoft Windows workstations use another password system. If you are unable to login to Windows or unable to access your employee mailbox, please contact the **network admin** for your department.

* This is a helpful article we publish from time to time. It has been edited to reflect changing titles and website addresses.

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**Email us:**

Have questions on content or technical issues? Please contact us.  
unt.uit@unt.edu

**UNT System:**

- UNT Home  
- UNT System  
- UNT Dallas  
- UNT Health Science Center
Introduction to basic Text Mining in R.

Link to the last RSS article here: Useful R Resources That May Have Escaped Your Attention -- Ed.

By Dr. Jon Starkweather, Research and Statistical Support Consultant

This month, we turn our attention to text mining. Text mining refers to the process of parsing a selection or corpus of text in order to identify certain aspects, such as the most frequently occurring word or phrase. In this simple example, we will (of course) be using R to collect a sample of text and conduct some rudimentary analysis of it. Keep in mind, this article simply provides a cursory introduction to some text mining functions.

First, we need to retrieve or import some text. We will use the University of North Texas (UNT) policy which governs Research and Statistical Support (RSS) services; UNT policy 3 – 5 for this example. We can use the ‘readLines’ function available in the ‘base’ package to retrieve the policy from the UNT Policy web site. Notice this policy’s HTML page is 305 lines long, which includes all the HTML formatting; not just the text of the policy.

Next, we need to isolate the actual text of the policy’s HTML page. This can take some investigating -- using the head and tail functions or simply pasting the HTML page into a text editor will allow us to identify the line number(s) which contain the actual text of interest. Once identified, we can use a ‘which’ function to isolate or extract the lines we are
interested in parsing. We notice below the actual text of the policy exists on lines 192 through 197, prefaced by the "Total University" header on line 189. We use the 'which' function to identify the line (189) with the header statement; then add 3 to it to arrive at line 192 (id.1; which identifies the first line of the policy). Then, we add a further 5 to that (192 + 5 = 197) to identify the last line of the policy (id.2). Then, we create a new object ('text.data') which contains only those lines which contain the text of the policy.

Now we are left with a vector object (text.data), which contains only the 6 lines of text of the policy (i.e. each paragraph of the policy has become a character string line of the vector).

Next, we need to remove the HTML tags (e.g. <p>) from each line of text. Generally multiple characters can be given in the 'pattern' argument within one implementation of 'gsub' function; but here we are using two implementations so that we can specifically remove each of the HTML (paragraph) tags while leaving in place all other instances of the letter 'p'. Notice, we are using the 'replacement' argument to eliminate any instance of the 'pattern' argument – using nothing between the quotation marks of the 'replacement' argument.

Now we can load the 'tm' package (Feinerer & Hornik, 2013) and convert our vector of character strings into a recognizable corpus of text using the 'VectorSource' function and the 'Corpus' function.
Next, we make some adjustments to the text; making everything lower case, removing punctuation, removing numbers, and removing common English stop words. The 'tm_map' function allows us to apply transformation functions to a corpus.

Next we perform stemming, which truncates words (e.g., "compute", "computes" & "computing" all become "comput"). However, we need to load the 'SnowballC' package (Bouchet-Valat, 2013) which allows us to identify specific stem elements using the 'tm_map' function of the 'tm' package.
Next, we remove all the empty spaces generated by isolating the word stems in the previous step. We use the `stripWhitespace` argument of the `tm_map` function to accomplish this task.

Now we can actually begin to analyze the text. First, we create something called a Term Document Matrix (TDM) which is a matrix of frequency counts for each word used in the corpus. Below we only show the first 20 words and their frequencies in each document (i.e. for us, each ‘document’ is a paragraph in the original policy).
Next, we can begin to explore the TDM, using the 'findFreqTerms' function, to find which words were used most. Below we specify that we want term / word stems which were used 8 or more times (in all documents / paragraphs).

Next, we can use the 'findAssocs' function to find words which associate together. Here, we are specifying the TDM to use, the term we want to find associates for, and the lowest acceptable correlation limit with that term. This returns a vector of terms which are associated with 'compu' at $r = 0.60$ or more (correlation) – and reports each association in descending order.

If desired, terms which occur very infrequently (i.e. sparse terms) can be removed; leaving only the 'common' terms. Below, the 'sparse' argument refers to the MAXIMUM sparse-ness allowed for a term to be in the returned matrix; in other words, the larger the percentage, the more terms will be retained (the smaller the percentage, the fewer [but more common] terms will be retained).
We can review the terms returned from a specific sparse-ness by using the 'inspect' function with the TDMs containing those specific sparse-ness rates (i.e. the terms retained at specific sparse-ness levels). Below we see the 22 terms returned when sparse-ness is set to 0.60.

```r
> tdm.common.60 <- removeSparseTerms(x = tdm, sparse = 0.60)
> tdm.common.20 <- removeSparseTerms(x = tdm, sparse = 0.20)
> tdm

A term-document matrix (161 terms, 6 documents)
Non-/sparse entries: 251/115
Sparsity : 74%
Maximal term length: 16
Weighting : term frequency (tf)
> tdm.common.60

A term-document matrix (22 terms, 6 documents)
Non-/sparse entries: 85/47
Sparsity : 36%
Maximal term length: 9
Weighting : term frequency (tf)
> tdm.common.20

> |
```

Next, we see the 5 terms returned when sparse-ness is set to 0.20 – fewer terms which occur more frequently (than above).
Conclusions

As stated in the introduction to this article, the above functions provide only a cursory introduction to importing some text and parsing it. Those seeking more information may want to consider taking a look at the 'Natural Language Processing' Task View at CRAN (Fridolin, 2013; link provided below). The task view provides information on a number of packages and functions available for processing textual data, including an R-Commander plugin which new R users are likely to find easier to use (at first).

For more information on what R can do, please visit the Research and Statistical Support Do-It-Yourself Introduction to R course website. An Adobe.pdf version of this article can be found here.

Until next time; no twerking while working!

References/Resources


Tutorial on text mining (author name not stated on page):


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Do you need training on widely used computer programs including those used in statistical analysis? If so, this monthly Benchmarks Online column is for you.

Statistical Analysis

Instructor-led courses are offered only by special request. Please contact an RSS member or Claudia Lynch if you are interested in taking such a class or wish to have someone offer a class for your students. SPSS, SAS and Introduction to R are offered online. Make sure and check out the RSS Matters article Statistical Resources in the July 2012 issue of Benchmarks Online.

Special classes can always be arranged with the RSS staff. Also, you can always contact the RSS staff for one-on-one consultation. Please read the FAQ before requesting an appointment though.

Especially for Faculty and Staff Members

In addition to the online statistical courses, which are available to students, faculty and staff, staff and faculty members can take courses offered through the Business Service Center (they have a new comprehensive training curriculum), and the Center for Learning Enhancement, Assessment, and Redesign (CLEAR). Additionally, the Center for Achievement and Lifelong Learning (CALL) offers a variety of courses, usually for a small fee.

EIS training is available and expanding. Click here for online tutorials.

Microsoft IT Academy

All students, faculty and staff within the UNT System now have access to online learning via the Microsoft IT Academy.

Microsoft E-Learning

Microsoft E-Learning courses are available for faculty and staff via our UNT System Microsoft Campus Agreement. See the article in the November 2013 issue of Benchmarks Online for more information.

Central Web Support

Central Web Support provides "End-User and Administrative Support for hosted general web sites, and Drupal websites for academic and administrative departments." Visit their website for "How-Tos about Everything."

CLEAR

CLEAR offers courses especially for Faculty Members. CLEAR training includes:

- Blackboard
- Turnitin
Turning Point
Assessment
Teaching Effectiveness
Respondus

Please check out CLEAR’s training and event calendar at http://clear.unt.edu/calendar for the latest information regarding Blackboard, CLEAR’s initiatives, and on campus instructional events.

Further information can be found here.

FREE SLOAN-C ONLINE WORKSHOPS

The University of North Texas is a premium member of Sloan-C College Pass. To request FREE ENROLLMENT in an online workshop by Sloan-C, please contact Amber Bryant with the name and date of the workshop selected.

- Sloan-C 2014 Workshops.

Please click on the link above to see the available 2014 workshops.

Ed2go

Ed2go are courses that are offered, for a fee, to UNT faculty, staff and students as well as the general public. According to the CALL website:

CALL has partnered up to provide online learning on a variety of topics. From standardized test preparation to database programming to training for libraries and their staff, there’s a variety of areas from which to choose in online learning.

The online minicourses, provided in conjunction with Ed2go, are standardized 12-lesson modules released over a six week period. (Courses are active for eight weeks to provide some flexibility). Each module features a quiz. Lessons are instructor-led and course participants and instructor communicate through a course discussion board. Lessons can be downloaded and saved. At the end of the course there is a final quiz. A passing grade opens a window that allows students to print out a course completion certificate.

Most courses are $89, and UNT faculty, staff and students may receive a $10 discount. Visit the online courses page at http://www.ed2go.com/unt/ or contact Tami Russell at 940.565.3353 for more information.

For additional information, visit the Ed2go blog here.

Information Security Awareness

The ITSS Information Security team offers Information Security Awareness training to all UNT faculty and staff. It is a policy requirement that ALL staff take an information security course at least once a year.

See the July 2013 "Link of the Month" for the latest information about Security Awareness trianing.

Business Service Center Training & Development

Provides training to UNT System institutions; http://bsc.untsystem.edu/training-development. There is also a link to download Office 2010 training (in PowerPoint 2010 format) on the BSC website.

UNT HR Training and Development

As noted on their website:

Monthly emails are sent to all employees with a list of current classes, many available by webcast. (Note: Few, if any classes are offered during the winter break, spring break holiday periods for all UNT System campuses.)

Learn more about classes.
Alternate Forms of Training

Many of the General Access Labs around campus have tutorials installed on their computers. See http://www.gacl.unt.edu/ for a list of labs and their locations. The 24 Center in Willis Library, for example, has a list of Tutorials and Software Support. The Library Instructional Unit also offers workshops and training, including "tech skills" training. Visit their websites for more information: http://www.library.unt.edu/library-instruction.

Info~Tech, UNT's IT Research Partner

Info~Tech is UNT's IT research partner. UNT System, UNT, UNT Health Science Center and UNT Dallas employees have access to Info~Tech research at: www.infotech.unt.edu (click on the UNT System name to login). Your standard EUID and Password gains you access to the Info~Tech system. Please take a moment to read their terms and conditions by clicking through the agreement when you set up your profile the first time you log in.

State of Texas Department of Information Resources

Another possible source of training for staff and, perhaps, faculty members is the Texas Department of Information Resources. A look at their Education and Training website reveals some interesting possibilities.

New Horizons Computer Learning Centers

New Horizons is a DIR vendor, which means that state agencies, like UNT, get special pricing for their services negotiated at the State level (click here for more information about DIR vendors). New Horizons offers courses at their own facilities in Dallas and Fort Worth, but will arrange for onsite training as well.
Staff Activities

Staff activities for UIT are reported in this column. ITSS staff activities are handled by ITSS Communications.

Transitions

New Employees:

- Andrew Hoyt, ACUS/Adaptive Lab consultant (part-time).
- Prasanth Appala, ACUS/Adaptive Lab consultant (part-time).
- Zhaochen Gu, ACUS/Adaptive Lab consultant (part-time).
- Lydie Kayembie, ACUS/Adaptive Lab consultant (part-time).

No longer working in UIT:

- Nagender Srinivas, ACUS/Adaptive Lab consultant (part-time).
- Revant Sati, ACUS/Adaptive Lab consultant (part-time).
- Mounika Kolluri, ACUS/Adaptive Lab consultant (part-time).
- Srinithya Kakani, ACUS/Adaptive Lab consultant (part-time).

Changes, Awards, Recognition, Publications, etc.

Congratulations to all the UIT employees honored at the President’s Sack Lunch on November 19, 2013:

- Raymond Banks
- Marsha Parr
- Jacob Flores
- Daniel Griffith
- Alan Garrison
- Christopher Johnson
- Jesse Hamner
- Sharukh Mithani

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UNT Information Technology Resolutions for 2014

By Dr. Elizabeth Hinkle-Turner, Director - Academic Computing Technical Services

In 2007 I made a New Year's resolution to start studying karate because it looked like my two sons were having so much fun in their class that I wanted to try it out! Anyone who knows me well knows that I am the type of person who does not stop before finishing a goal and - indeed - I now enjoy my "non UNT work life" as a karate instructor and all-around ninja! This year I have been a little late on making my resolutions and maybe you are late to this task as well.

Here is some help: make some information technology resolutions designed to brighten your life and make your UNT experience just that much easier and so much more "fun"! For a quick reference on some general "do's" and "don'ts" that still apply you can see my December 2010 article detailing Santa's IT Naughty and Nice list as well.

Resolution: Investigate and take advantage of all the FREE and almost free technology provided to you at UNT - There are so many technology perks available to the UNT community it is almost impossible to count them all but I will try!

Perk - Free productivity software: All students should check out the General Access Computer Labs and see all the software goodies available to them. No need to purchase Office, Photoshop, and those expensive research apps (SAS, SPSS etc) - the majority of our GACLs have those installed and working on every machine for you already. If you are in Art or Music, you have even more goodies (Finale, animation applications) on the lab machines. Other free software includes the Office Web Apps that all students have as part of their EagleConnect email accounts.

Faculty and staff can continue to get reduced-price Microsoft products for working at home in a variety of ways. You can still go to the bookstore and over at the information desk, request cd copies of Office and Microsoft upgrades. The cost is still around $10 - $15 depending on the product which is a steal! Faculty and staff can also take advantage of our Microsoft Home Use and E-Learning program which is outlined in this recent Benchmarks article.

Other educational discounts on software are available in other venues. Our UNT bookstore has a partnership with ThinkEDU to offer a variety of items. An article about these other options was published in the September 2013 issue of Benchmarks.

Perk - Free productivity hardware: Those General Access Computer Labs mentioned above? They also have the latest and greatest hardware (and best ethernet internet connections!) for students as well. Most labs also provide scanners, DVD burners and a host of printing solutions for students. There are also fun things like large-format printing (there is a charge involved with some of this type of printing) in the CVAD lab and the College of Music lab has a recording studio! Don't forget that our libraries check out laptops for student use as well.
The General Access Computer Labs have lots of computers (here - Willis Library)

Perk - Free productivity connectivity: That's right - avoid those expensive wireless charges from your providers. You can get wireless connectivity on the UNT campus through either the non-secure EagleNet wireless network or the secure UNT wireless network. All students, faculty and staff can also get free wireless connectivity AT OTHER INSTITUTIONS that participate in the Eduroam consortium! This includes places like Texas A and M and - if you are more exotic in your travel destinations - the University of Paris (ooh-la-la!). Even better - the UNT wireless network is getting a MAJOR UPGRADE this year so expect better connectivity to continue throughout 2014. All faculty and staff offices and the computer labs have their machines connected to the fast ethernet network and students in the dorms have both wired and wireless connectivity via Resnet.

Resolution: Investigate and take advantage of all the FREE information technology ASSISTANCE and ADVICE provided to you at UNT. We have dozens of folks in a variety of locations to help you with your technology needs.

Perk - The UNT UIT Helpdesk: Really - need I say more? Our UNT UIT Helpdesk is physically located in Sage Hall 130. Go to the UIT Helpdesk website for hours of operation including phone assistance and walk-in assistance. The Helpdesk website is also full of tutorials and FAQs on how to configure your devices to take advantage of IT at UNT.

Perk - Make your research visually fabulous! Check out the Academic Computing and User Services (ACUS) Research and Visualization Environment (RAVE - it.unt.edu/rave) which offers free consultation on how to make your research results really shine at conferences and in the classroom. The RAVE staff has assisted in great presentations nationally and internationally. Locally, recent research exhibitions featuring RAVE work have been at the UNT on the Square gallery and at the Perot Museum. RAVE manager and consultant, Dr. Jesse Hamner, offers several workshops throughout the year in classes (by request of faculty) and through the UNT Libraries' workshop series. The RAVE will also print your research poster (there is a fee associated with this) and will soon have a 3D printer available as well.

Perk - Make your research statistically significant! The ACUS Research and Statistical Support (RSS) division
consultants (all of whom have doctorates in research fields) are available by appointment to assist graduate students and faculty in designing the best possible survey tools and methodologies for conducting higher-level research. Come see our research consultants and before you know it, you will be delving into the oh-so-cool-and-productive world of open source R programming and bandying about phrases like "Well the GINI coefficient was particularly enlightening" and "I found that regression analysis was really the only way to go when doing this project" with the best of them. (Me - I have a doctorate in MUSIC so I have absolutely NO idea what I just wrote about in that last sentence! But - if you ask me about "all-combinatorial set theory", I'm your girl...)

Perk - Don't go crazy developing online courses in Blackboard on your own! The good folks at CLEAR have their own faculty helpdesk and personnel to assist you in developing terrific courses and assessment tools to make the students in your courses as successful and chock full of knowledge as possible. Other great services offered by CLEAR include book clubs, webinars, open lab times, and seminars on using technology in the classroom. See it all at clear.unt.edu.

Resolution: See how you can utilize the REALLY BIG INFORMATION TECHNOLOGY at UNT.

Perk - got Big Data? We can help! Research consultants in ACUS RSS and the RAVE (as well as many folks in the library) can assist you in designing "big data" projects, storing and analyzing that data, and presenting that data.

Perk - got Big Computing? Well - we have a Big Computer (cluster)! It is called TALON and has been vital to major research projects at UNT since its construction in 2009 and the entire cluster was recently rebuilt (Talon 2.0 - read about it here). For more information about High Performance Computing at UNT see hpc.unt.edu. The high performance computing staff (featuring consultants with doctorates in a variety of HPC research fields) can assist you in getting your research team up and running on TALON.

Perk - got Big Testing? We have a BIG TESTING CENTER! Faculty who want to test their students in a large-scale, secure online testing environment should check out the Sage Hall Testing Center (it.unt.edu/test) where 136 students at a time can be assessed. The Sage Hall Testing Center features advanced assessment analytic and security tools (Respondus Lockdown Browser, Examsoft) for online testing needs and can configure its four rooms and dozens of machines for nearly any situation.
Resolution: See how UNT Information Technology can assist you with your 2014 Healthy Living Goals!

I bet you didn’t think that UNT Information Technology could assist you with the more traditional New Year’s resolutions to live healthy and get in shape. But it can. Staff in University Information Technology are responsible for many of the terrific tech features housed in the Pohl Recreation Center including the wi-fi there and the energy-generating hardware attached to many of the exercise machines in the Center producing sustainable energy from your hard-working sweat! IT staff also provide technology assistance for all the great clinics and offices in the Wellness Center and when you are out having fun watching our UNT athletes play, all those fancy screens and projection features involved IT as well. (Pssst! We are EVERYWHERE!)

I could go on and on (and I have...boy, is this a long article) but I bet you get the picture! There are lots of terrific information technology tools and perks here at UNT. Resolve to try them out today!

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Today's Cartoon

“I’ll probably stay in school until I get my PhD. Someday I’d like to feel smarter than my phone.”

From "Today's Cartoon by Randy Glasbergen", posted with special permission.
For many more cartoons, please visit www.glasbergen.com.

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