

CODY DUNNE
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EDUCATION

PhD student: Computer Science with a specialty in Human Computer Interaction University of Maryland, College Park, MD
August 2007 – Present
Advisor: Ben Shneiderman – www.cs.umd.edu/~ben

Master of Science: Computer Science University of Maryland, College Park, MD
August 2007 – May 2009

Bachelor of Arts: Double major in Computer Science and Mathematics Cornell College, Mt. Vernon, IA
August 2003 – June 2007
Honors: Magna cum laude
Senior Computer Science Student Achievement Award
First Year Computer Science Student Achievement Award
National Excellence Scholarship / National Merit Finalist
Ed Hill Mathematics Scholar
First place in 2004 ACM N. Central N. America Programming Contest
Dean's List – Highest Honors (Spring 2006, Spring 2007)
Dean's List – High Honors (2003-2004, 2004-2005, Fall 2006-2007)
Dean's List – Honors (Fall 2005-2006)

PUBLICATIONS

Conference Papers (Refereed)

Saif Mohammad, Cody Dunne, and Bonnie Dorr. Generating high-coverage semantic orientation lexicons from overtly marked words and a thesaurus. In *EMNLP '09: Proc. 2009 conference on Empirical Methods in Natural Language Processing*, pages 599–608, Morristown, NJ, USA, August 2009. Association for Computational Linguistics. ISBN 978-1-932432-62-6. URL www.aclweb.org/anthology/D/D09/D09-1063.pdf

Marc Smith, Ben Shneiderman, Natasa Milic-Frayling, Eduarda Mendes Rodrigues, Vladimir Barash, Cody Dunne, Tony Capone, Adam Perer, and Eric Gleave. Analyzing (social media) networks with NodeXL. In *C&T '09: Proc. fourth international conference on Communities and Technologies*, pages 255–264, New York, NY, USA, 2009. ACM. ISBN 978-1-60558-713-4. DOI:10.1145/1556s460.1556497

Workshop Papers (Refereed)

Elizabeth M. Bonsignore, Cody Dunne, Dana Rotman, Marc Smith, Tony Capone, Derek L. Hansen, and Ben Shneiderman. First steps to NetViz Nirvana: evaluating social network analysis with NodeXL. In *SIN '09: Proc. international symposium on Social Intelligence and Networking*. IEEE Computer Society Press, 2009. DOI:10.1109/CSE.2009.120

Ryan Blue, Cody Dunne, Adam Fuchs, Kyle King, and Aaron Schulman. Visualizing real-time network resource usage. In John R. Goodall, Gregory J. Conti, and Kwan-Liu Ma, editors, *VizSec '08: Proc. 5th international workshop on Visualization for Computer Security*, volume 5210 of Lecture Notes in Computer Science, pages 119–135, Berlin, Heidelberg, 2008. Springer-Verlag. ISBN 978-3-540-85931-4. DOI:10.1007/978-3-540-85933-8_12

Tech Reports

Cody Dunne and Ben Shneiderman. Improving graph drawing readability by incorporating readability metrics: a software tool for network analysts. Human-Computer Interaction Lab Tech Report HCIL- 2009-13, University of Maryland, May 2009. URL www.cs.umd.edu/localphp/hcil/tech-reports-search.php?number=2009-13

RESEARCH EXPERIENCE

Research Assistant University of Maryland, College Park, MD
August 2009 – May 2010
Extended the scope of our graph drawing readability metrics and set up a user study on their usefulness for helping network analysts create more effective visualizations. Worked with the STICK project on visualizing networks of innovation. Advanced the iOpener system for visualizing relationships between technical papers and conducted user studies on its effectiveness. Served as an advisor for the NodeXL project on visualization and usability issues.

Research Assistant

University of Maryland, College Park, MD

August 2008 – August 2009

Developed graph drawing readability metrics to help network analysts create more effective visualizations, using individual node and edge measures for localized problem identification. Designed and ran a usability study for the NodeXL project and served as an advisor on visualization and usability issues. Prototyped a system with the iOpener project for visualizing relationships between academic papers, summarizing clusters of documents, and displaying citation context.

Research Assistant

University of Maryland, College Park, MD

June 2008 – August 2008

Analyzed the relationships between cancer research institutions using network visualization and found insights for the National Cancer Institute on how to improve inter-institute collaboration. Improved the SocialAction network analysis tool.

Summer Undergraduate Research Fellowship Intern

National Institute of Standards and Technology, Gaithersburg, MD

June 2007 – August 2007

Developed a prototype display and interaction system for emergency response simulations using single display groupware. Evaluated the breadth of human-computer interfaces for presentation settings and wrote up findings for a NIST Internal Report.

Summer Undergraduate Research Fellowship Intern

National Institute of Standards and Technology, Gaithersburg, MD

June 2006 – August 2006

Evaluated emerging human-computer interfaces for large-scale presentation and collaboration rooms such as computer vision systems for hand or glove tracking, multiple-user input devices, and software for distance collaboration. Gave presentations and usage recommendations to two divisions at NIST. A few of these technologies may be implemented in the Advanced Manufacturing Systems and Networking Testbed Facility at NIST.

TEACHING EXPERIENCE

Teaching Assistant

University of Maryland, College Park, MD

Fall 2007

Led two recitation sections for CMSC 131 – Object Oriented Programming I, taught by Fawzi Emad and Jandelyn Plane. Additional duties included grading and holding office hours.

Teaching Assistant

University of Maryland, College Park, MD

Spring 2008

Led two recitation sections for CMSC 132 – Object Oriented Programming II, taught by Nelson Padua-Perez and Bill Pugh. Additional duties included grading and holding office hours.

Technology Center Director

Boys & Girls Clubs of America, Worland, WY

June 2001 – July 2003

Educated K-12 youth in technology related areas, including HTML, network design, electrical circuits, and use of popular software. Also responsible for organizing and directing educational and athletic activities, reinforcing positive values, and providing emotional support. Additional duties included the maintenance and repair of club computers and electronic devices.

COMMITTEES & REVIEWING

AVI '10: Advanced Visual Interfaces International Working Conference

NLPIR4DL '09: ACL/IJCNLP-2009 Workshop on Text and Citation Analysis for Scholarly Digital Libraries

VAST '09: IEEE Symposium on Visual Analytics Science and Technology Challenge

GRADUATE COURSEWORK

CMSC724	Database Management Systems	Amol Deshpande
CMSC818K	Decentralized and Peer-to-Peer (Distributed) Systems	Pete Keleher
CMSC858L	Graphs and Networks in Computational Biology	Carl Kingsford
CMCS723/LING723	Computational Linguistics I	Saif Mohammad, Nitin Madnani, Bonnie Dorr
CMSC733	Computer Processing of Pictorial Information	Yiannis Aloimonos
CMSC734	Information Visualization	Ben Shneiderman
CMSC751	Parallel Algorithms	Clyde Kruskal
CMSC858P	Algorithms for Biosequence Analysis	Mihai Pop
CMSC634	Empirical Research Methods for Computer Science	Adam Porter
CMSC711	Computer Networks	Neil Spring

RESEARCH PROJECTS

- Analyzing networks of innovation for the STICK project terpconnect.umd.edu/~pwang/STICK
- Visualizing and summarizing citation networks with the iOpener group tangra.si.umich.edu/clair/iopener
- Advisor for the NodeXL project www.codeplex.com/NodeXL
- NetGrok, a tool for visualizing computer networks in real-time www.cs.umd.edu/projects/netgrok
- Real-time graph drawing readability metrics in SocialAction www.cs.umd.edu/hcil/socialaction
- Select bibliography for graph drawing readability metrics www.cs.umd.edu/~cdunne/projs/graphbib.html
- BackupPC Installation Guide for Windows 7/Vista/XP Clients www.cs.umd.edu/~cdunne/projs/backuppc_guide.html
- Cornell College Student Symposium www.cornellcollege.edu/student-symposium
 - (2007) – Created a committee and faculty web database & discussed the challenges of web application design. symposium.cornellcollege.edu/2007/04/14/how-we-can-serve-millions-software-engineering-for-the-web/
 - (2007) – Displayed emerging human-computer interfaces and discussed previous summer evaluation work at NIST. symposium.cornellcollege.edu/2007/04/14/human-computer-interfaces-of-tomorrow-how-science-fiction-has-become-reality/
 - (2006) – Designed and built a 6-legged autonomous walking robot. symposium.cornellcollege.edu/2006/04/29/six-legged-robot/
 - (2005) – Designed, built, and tested a 4-bit Arithmetic and Logic Unit for a computer processor
 - (2004) – Created a Java 3D first-person-shooter computer game and level editor. symposium.cornellcollege.edu/2004/04/17/the-feasibility-of-using-java3d-for-first-person-game-design/

LANGUAGES

Programming: Primarily Java. Some experience with Python, XHTML, CSS, PHP & CakePHP, Perl, Scheme, C, ML, Fortran, Prolog, Windows batch scripting, MySQL -- Willing to learn additional programming languages outside of work

Spoken: 4 courses of undergraduate Spanish

OTHER EXPERIENCE

Computer Technician

June 2004 – August 2004

Implemented a backup system for a server and its client workstations and was responsible for all computer maintenance and repair.

Wind River Seed (Family), Manderson, WY

Researcher, Farm Worker, and Seed Collector

July 2003 – August 2003, June 2004 – August 2004

Researched the effects of drought stress on native Wyoming reclamation plants by measuring plant sap pH, Brix, and electrical conductivity. Also performed various tasks including seed collection, herbicide application, and equipment transportation.

Absaroka Farm (Family), Worland, WY

Owner of Disk Jockey Business

July 2000 – August 2003

Built a computerized disk jockey business from scratch that provided music for weddings, bars, dances, and other social events. Received a loan for startup costs, including a speaker system and light display, which was rented and then sold to another local DJ after leaving for college.

Frontier DJ (Owner), Manderson, WY

OTHER EDUCATION

Computer Repair and Maintenance Course

January 2002 – March 2002

Northwest College, Powell, WY

Troubleshooting and Maintaining PCs Seminar

July 2001

National Seminars Group, Billings, MT

MEMBERSHIPS & ORGANIZATIONS

- IEEE Student Member
- Association for Computing Machinery Student Member
- Mathematical Association of America Student Member
- President, Torch chapter of the Mortar Board national senior honor society
- President (2 years) & Treasurer, Sigma Tau Social & Service Group - Sponsor annual scholarship & science fair award
- Treasurer, Cornell College Chapter of the Mathematical Association of America
- Eyes of the World international student support and cultural awareness group
- Disc jockey for KRNL (the Cornell College radio station)

SERVICE ACTIVITIES

- Cornell College's Lunch Buddies elementary student mentoring program (3 years)
- Worked on World2Kids.com when it was active
- Cornell College Mathematics Department Faculty Search Committee
- Cornell College Sophomore Writing Portfolio pilot project
- Sponsored and organized a seminar on repetitive stress injuries for Cornell College
- Numerous volunteer activities through Cornell College's Leadership and Service Office

References available upon request