

EDUCATION

PhD in Computational Linguistics

Dec 2011

The Ohio State University, Columbus, OH

Dissertation title: "ERRON: A Phrase-Based Machine Translation Approach to Customized Spelling Correction"

Committee: Christopher Brew (Chair), Eric Fosler-Lussier, William Schuler, Michael White

BA in Linguistics

Dec 2004

University of Kentucky, Lexington, KY

FORMAL TEACHING EXPERIENCE

University of Alabama in Huntsville, Huntsville, AL

First Year Experience: Succeeding in Cybersecurity: Fall 2022

Cybersecurity Principles: Fall 2021, Spring 2022, Fall 2022, Spring 2023

Networking and Telecommunications: Fall 2019, Fall 2020, Fall 2021, Fall 2022

Computer Network Defense: Spring 2020, Spring 2021, Spring 2022, Fall 2022, Spring 2023

Social Engineering – The Human Element of Security: Fall 2022

Science Applications International Corporation, Huntsville, AL

Computer Network Operations (CNA and CND) Courses for National Guard and Army Reserve (2017-present)

Johns Hopkins University Applied Physics Laboratory, Laurel, MD

Cyber Systems Testing and Evaluation: Spring 2015, Spring 2016 (APL)

High Schoolers Defeating Hackers (Basics of Cybersecurity): Summer 2015 (APL)

The Ohio State University, Columbus, OH

Introduction to Linguistics: Spring 2008, Spring 2009

Basics of Language for Language Learners: Winter 2011

Codes and Codemaking: Winter 2008, Autumn 2009, Winter 2010, Spring 2010, Autumn 2010

Summer Linguistic Institute for Youth Scholars (SLIYS): Summer 2009, Summer 2010

- Received consistently high evaluations (cumulative 4.9/5) and numerous awards for my teaching
- Increased enrollment in new course on cryptology (Codes and Codemaking) from less than 20 students to two full sections with maxed-out waitlists (70+ total enrolled students per semester) in only 2 years
- More than 10 years of teaching at the university level
- More than 20 years of experience teaching adult learners

A portfolio of teaching materials and student feedback can be provided upon request.

RESEARCH EXPERIENCE

Doctoral Researcher

2005-2011

Department of Linguistics, The Ohio State University

- Collected and annotated corpora of spelling errors by second-language learners
- Conducted thorough analysis of second-language spelling errors to identify error patterns and tendencies displayed by various language communities
- Designed a novel method for automatically creating customized spellcheckers for groups that make similar spelling errors (dyslexics, writers of English as a foreign language (WEFL), etc) using software created for machine translation
- Tested this method by creating a customized spellchecker for Japanese writers of English which handily outperformed Microsoft Word and ASPELL on JWEFL errors

Research Assistant

2008-2009

Department of Psychology, The Ohio State University

- Assistant to Professor Mark Pitt
- Developed a method for automatically assigning part of speech tags to the Buckeye Corpus of conversational speech (a 300,000-word audio corpus) with 94% accuracy.

Research Assistant

2007

Cincinnati Children's Hospital, Cincinnati Ohio

- Part of a team that created a program for automatically assigning ICD9-CM (disease) codes to patient records using the doctor's free text with human accuracy
- Helped develop an international challenge for improving automatic ICD9-CM code assignment

PUBLICATIONS (UNCLASSIFIED)

- Hovermale, DJ, "ERRON: A Phrase-based Machine Translation Approach to Custom Spelling Correction", dissertation, The Ohio State University Department of Linguistics, December 2011.
- Hovermale, DJ, "An Analysis of the Spelling Errors of L2 English Learners", CALICO (Computer-Assisted Language Instruction Consortium) 2010, Amherst, MA, USA, June 10-12, 2010.
- Hovermale, DJ, "Using social media to enhance the classroom experience", Digital Media in a Social World 2010 Conference (DMSW), February 19-20, 2010 in Columbus, Ohio, USA.
- Hovermale, DJ and Mehay, Dennis N., "Real-word Spelling Correction for CALL", MCLC-6 (6th Annual Midwest Computational Linguistics Colloquium). Bloomington, Indiana, USA, May 2-3, 2009.
- Hovermale, DJ and Corl, Kathryn A., "Automatic Annotation of Texts for Merkmal! Exercises", Digital Media in a Social World 2009 Conference, Columbus, Ohio, USA.
- Hovermale, DJ. "The Chimwiini Diminutive Prefix", The 40th Annual Conference on African Languages, Champaign-Urbana, IL. April 09-11, 2009.
- Hovermale, DJ and Scott Martin. "Developing an Annotation Scheme for ELL Spelling Errors", Proceedings of MCLC-5 (Midwest Computational Linguistics Colloquium) East Lansing, Michigan, USA, May 10-11, 2008.
- Pestian, J.P., Brew, C., Matykiewicz, P., Hovermale, DJ, Johnson, N., Cohen, K.B., Duch, W. A shared task involving multi-label classification of clinical free text. In: BioNLP '07: Proceedings of the Workshop on BioNLP 2007, Morristown, NJ, USA, Association for Computational Linguistics, 97-104.
- Hovermale, DJ, "SCALE: Spelling Correction Adapted for Learners of English", CALICO 2008 ICALL SIG (Computer-Assisted Language Instruction Consortium Intelligent Computer-Assisted Language Learning Special Interest Group) pre-conference workshop, San Francisco, California, USA, March 18-19, 2008.
- Hovermale, DJ, "Vowel Deletion and the Interaction of Sibilants in Chimwiini", 13th Midcontinental Workshop on Phonology, Columbus, Ohio, USA October 2007.
- Pestian, J.P., Brew, C., Matykiewicz, P., Hovermale, DJ, Johnson, N., Kohen, K. B., Duch, W., "Multi-label Classification of Clinical Free Text: Using a Shared Task Model to Develop Resources and Refine Algorithms". Ohio Collaborative Conference on Bioinformatics (OCCBio). Oxford, Ohio, USA, July 9-11, 2007.

HONORS AND AWARDS

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| • Inducted into the Military Cyber Professional Association's Order of Thor | 2018 |
| • Special Achievement Award for exceptional performance, SAIC Studies and Analysis Division | 2018 |
| • SAIC Dream Team Award presented for exceptional performance during Cyber Shield 17 JELC | 2017 |
| • Challenge coin presented by USCYBERCOM J7 for exceptional performance at Cyber Flag/Guard 17 | 2017 |
| • SAIC GEM award for outstanding customer support at cyber exercises | 2017 |
| • Challenge coin presented by National Guard Bureau G36 for exceptional perf. at Cyber Shield 17 | 2017 |
| • Challenge coin presented by Asymmetric Operations Sector, JHU/APL | 2016 |
| • Challenge coin presented by USCYBERCOM J7 for exceptional performance at Cyber Flag/Guard 16 | 2016 |
| • STEMmy Award (for exceptional STEM volunteer effort) presented by JHU/APL STEM office | 2015 |
| • STEMmy award for outstanding STEM outreach, Johns Hopkins APL STEM office | 2015 |

- Challenge coin presented by LtGen Jon Davis, Deputy Chief, United States Cyber Command 2012
- Challenge coin presented by General Keith Alexander, Director, National Security Agency 2012
- Graduate Associate Teaching Award from the Graduate School of The Ohio State University 2011
- Most Valuable Professor Award from the OSU Student Athlete Advisory Board 2009
- Outstanding Faculty Program from the Ohio State University 2009
- National Science Foundation Graduate Research Fellowship Honorable Mention 2006, 2007, 2008
- Dean's Enrichment Fellowship from the Graduate School of The Ohio State University 2005
- University Fellowship from the Graduate School of The Ohio State University 2005

RELEVANT SKILLS

- Graduate of the Joint Advanced Cyber Warfare Course (JACWC), United States Cyber Command
- Fluent in Russian; experience with Spanish and French; knowledge of many other languages, including: Arabic, Chimwiini (Bravanese), Estonian, Japanese, Latvian, Lithuanian, Swahili, etc.
- HP certified repair technician (hardware and software) laptops/desktops; mobile devices
- Programming experience in Python, Java, C, Prolog, R
- Experience with Windows and Linux operating systems, Microsoft Office suite, HTML, LaTeX, VMWare, Wireshark, Sysinternals product suite, GIMP, Moses/Joshua, Natural Language Toolkit, SRILM toolkit, etc.
- Reverse engineering (Ida, Ghidra, OllyDbg, dex2jar, etc.)
- Experience with cyber exercise situational awareness and analysis tools (Pointillist, Dagger, Galaxy, etc.)
- Experience with cyber exercise assessment tools (MATT, RT, etc.)
- Experience with virtual network engineering and development (OpenStack, Amazon Web Services, etc.)
- Experience with course design, test design, and e-learning video production (Replay 2, Davinci Resolve, etc.)
- Security Information Event Management (Elastic Search, Kibana, Beats)

INDUSTRY EXPERIENCE

- Cyber Operations Training Analyst, Senior Principal/Cybersecurity Analyst, Senior Principal
Science Applications International Corporation Huntsville, AL Nov 2016 – present
 - Served in the leadership of all three capstone-level US military cyber exercises (Cyber Guard, Cyber Flag, Cyber Shield)
 - Planned and evaluated military cyber exercises in conjunction with US CYBERCOM and National Guard Bureau
 - Cultivated customer relationships to scope requirements and develop future business
 - Assisted team in development of proposals
 - Developed and taught cyber exercise assessment courses for military personnel
 - Designed novel assessment methodologies for military cyber exercises and executed these methodologies as assessment lead at flagship cyber exercises for the National Guard Bureau and United States Cyber Command
 - Developed and delivered interactive online cybersecurity training for National Guard and United States Army Reserve cyber teams
 - Principal author of several official handbook/guidebooks for US military cyber exercises
 - Served as Consultant, Assessment Lead, Joint Exercise Control Group Lead, and Trainer for capstone-level US military cyber exercises
 - Led MSEL development for military cyber exercises
 - Designed, developed, and led the execution of short, preparatory exercises for cyber teams scheduled to participate in capstone exercises
 - Lead professional cyber exercise force training of the US Army Reserve 84th Atlantic Training Command/75th Gulf Training Command

- Senior Cyber Test Engineer/Exercise Assessment Lead/Section Supervisor
 Johns Hopkins University Applied Physics Lab Laurel, MD Aug 2014 – Nov 2016
 - Tactical assessment lead for military cyber exercises (Cyber Guard, Cyber Shield, etc)
 - Planned and evaluated military cyber exercises with USCYBERCOM, National Guard Bureau, and the U.S. Army Reserve Cyber Protection Brigade
 - Developed and taught a cyber exercise assessment course to military personnel
 - Developed and taught a cyber systems testing and evaluation course
 - Consulted government sponsor on course development, experimental design, and evaluation of an advanced course for Cyber Protection Teams
 - Developed an exercise assessment framework which is the current standard in premier military cyber exercises and certification/validation events
 - Shaped the design and development of software for implementing said framework which is used at all capstone-level USCYBERCOM/National Guard Bureau military cyber exercises
 - Cultivated relationships with government sponsors, including the main planners and decision makers for premier cyber exercises
 - Developed new business opportunities centered on exercise assessment and training
 - Created staffing plans, cost estimates, presentations, and other documentation necessary for the management of cyber exercise projects
 - Conducted performance reviews for staff
 - Mentored/coached technical staff as line management and as task lead
 - Interviewed candidates and participated in hiring decisions
 - Ensured that staff were gainfully employed on sponsor tasks
 - Monitored employee relationships with project leads and sponsors
 - Designed and conducted operational tests of software for government agencies
- Exploitation Cryptanalyst (Cryptanalysis Development Program)
 National Security Agency Fort Meade, MD Jan 2012 – Aug 2014
 - Conceptualized, designed, and implemented a revolutionary cyber capture the flag (CTF) competition in conjunction with MIT's Lincoln Laboratory
 - Co-founder of the NSA Cyber Grid, an innovative approach to enhancing cyber security education
 - Managed a team of developers to create two prototype cyber education games for the NCG
 - Official NSA observer at cyber CTF competitions and NSA/USCYBERCOM military cyber exercises
 - Founder and co-chair of the National Cryptologic School's Student Advisory Board
 - Developed exploitation software, both standalone programs and modules of a larger software suite
 - Computer forensics, including static and dynamic analysis
- Owner/President
 HTS Translation Management Gambrills, MD Jun 2006 – present
 - Acquired contracts for large translation projects by cultivating relationships with clients
 - Evaluated, hired, and managed qualified subcontractors to ensure timely project completion
 - Performed quality control of completed documents to deliver high quality product
- Regional Sales Representative/Account Manager
 Symiot Business Group/National Interiorscape Network Lexington, KY Dec 2003 – June 2006
 - Responsible for the sale of memberships in a consortium of property service companies and managing the accounts of existing customers for the entire eastern half of the United States
 - Attained lofty sales goals each quarter in addition to 90+% retention of current customers
 - Planned and coordinated conferences and retreats for consulting clients

UNIVERSITY/GOVERNMENT SERVICE

- ISACA Cybersecurity Club Advisor 2021-present
- Founder of the Government Cyber Exercise Community 2017-present
- Founder and Co-Chair of the NSA/ADET Student Advisory Board 2013-2014
- Faculty Advisor, The Ohio State University Black Chamber Society 2009-2011
- President, The Ohio State University Student Linguistic Association 2008-2009

VOLUNTEER WORK/COMMUNITY SERVICE

- Cyber Patriot Mentor (Sparkman Middle School) 2021-present
- Maryland MESA (Cyber Robot competition, high school cybersecurity instructor, etc) 2014-present
- Youth sports coach (YMCA basketball/soccer, Upward basketball, etc.) 2006-present
- Youth Minister, Instructor, Lay Clergy – The Church of Jesus Christ of Latter-Day Saints 2001-present
- Instructor - AACPS Environmental Literacy Program (Arlington Echo/Camp Woodlands) 2013-2015
- Scoutmaster, Cubmaster, Commissioner – Boy Scouts of America (Woodbadge trained) 2007-2019
- Volunteer Religious/Service Missionary in the former Soviet Union (Baltic States) 1999-2001