

# AMANDA SWEARNGIN

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## EDUCATION

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**University of Washington**

Ph.D. in Computer Science

*Began September 2015*

**University of Nebraska - Lincoln**

Master of Science in Computer Science

*May 2012*

**GPA:** 3.91

**Thesis Title:**

*CogTool-Helper: Leveraging GUI Functional Testing Tools to Generate Predictive Human Performance Models*

**University of Nebraska - Lincoln**

Bachelor of Science in Computer Science

*May 2010*

**GPA:** 3.62

**Major GPA:** 3.76

## REFEREED CONFERENCE PUBLICATIONS

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**Amanda Swearngin**, Myra B. Cohen, Bonnie E. John, Rachel K.E. Bellamy. *Human Performance Regression Testing*. International Conference on Software Engineering (ICSE), pages 152 - 161, 2013. (acceptance rate: 18.5%)

· Collaboration with **IBM Research**

**Amanda Swearngin**, Myra B. Cohen, Bonnie E. John, Rachel K.E. Bellamy. *Easing the Generation of Predictive Human Performance Models from Legacy Systems*. Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI), pages 2489 - 2498, 2012. (acceptance rate: 23%)

· Collaboration with **IBM Research**

Sandeep Kaur Kuttal, Anita Sarma, **Amanda Swearngin**, Gregg Rothermel. *Versioning for Mashups — An Exploratory Study*. International Symposium on End User Development (IS-EUD), pages 25 - 41, 2011. (acceptance rate: 27%)

**Amanda Swearngin**, Berthe Y. Choueiry, Eugene C. Freuder. *A Reformulation Strategy for Multi-Dimensional CSPs: The Case Study of the SET Game*. Symposium on Abstraction, Reformulation, and Approximation (SARA), pages 107 - 116, 2011.

## REFEREED WORKSHOP PUBLICATIONS

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**Amanda Swearngin**, Berthe Y. Choueiry, Eugene C. Freuder. *Multi-Dimensional Models Facilitate Automatic Reformulation: The Case Study of the SET Game*. Tenth International Workshop on Constraint Modeling and Reformulation (ModRef), pages 132 - 146, 2011.

## PATENTS

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Linking graphical user interface testing tools and human performance modeling to enable usability assessment, Rachel K. E. Bellamy, Myra B. Cohen, Bonnie E. John, Padmanabhan Santhanam, **Amanda Swearngin**, US Patent App. 13/672,237, 2012

## PRESENTATIONS

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*Easing the Generation of Predictive Human Performance Models from Legacy Systems*, Conference presentation at CHI (SIGCHI Conference on Human Factors in Computing Systems), May 2012.

*An Update on COMET (Community Event-based Testing)*, Workshop presentation at TESTBEDS, co-located with ICST (International Conference on Software Testing, Verification, and Validation), March 2011.

## RESEARCH EXPERIENCE

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### University of Washington

*Graduate Research Assistant*

*Advisors: Andy Ko and James Fogarty*

September 2015 - Present

*Seattle, WA*

- Researching methods for addressing change in web interfaces through the development of a system to detect change, and effectively educate the user of changes in web interfaces.

### University of Nebraska - Lincoln

*Graduate Research Assistant*

*Advisor: Dr. Myra Cohen*

August 2010 - May 2012

*Lincoln, NE*

- Developed *CogTool-Helper*, which uses automatic UI-model extraction and test case generation to automatically create storyboards and models for CogTool, a tool for predictive human performance modeling of user interfaces.

### University of Nebraska - Lincoln

*Undergraduate Research Assistant*

*Advisor: Dr. Myra Cohen*

January 2010 - May 2010

*Lincoln, NE*

- Researched Combinatorial Interaction Testing (CIT) techniques and developed educational tutorials for the CIT web portal.

### Holland Computing Center

*Undergraduate Research Assistant*

*Advisor: Dr. David Swanson*

Summer 2008 - Spring 2010

*Lincoln, NE*

- Completed UCARE (Undergraduate Creative Activities and Research Experience) project designing and implementing an interactive web portal for viewing real-time computing statistics.

Project Name: *MyHCC - An Interactive Window into Campus Computing Resources*

## INDUSTRY EXPERIENCE

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### Microsoft Corporation

*Software Development Engineer II*

July 2012 - September 2015

*Fargo, ND*

- Designed, developed, and tested features for the web-client of the next version of Dynamics AX, Microsoft's new cloud-based ERP solution.
- Developed visual regression testing tools for validating the product across multiple browsers and environments.
- Mentored and trained 3 new members of the team to facilitate quicker onboarding.

### Cerner Corporation

*Software Engineering Intern*

Summer 2010

*Kansas City, MO*

- Conducted static analysis for code improvement and refactoring, conducted performance analyses, and implemented code optimizations in C++.

### Cerner Corporation

*Software Engineering Intern*

Summer 2009

*Kansas City, MO*

- Designed UI and implemented interactive patient summary app for iPhone using JavaScript, CSS, and HTML.

## WORK HISTORY

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### Cornerstone Campus Ministries

*Webmaster & Student Intern*

Fall 2008 - Spring 2010

*Lincoln, NE*

### Girl Empowerment and Mentoring (G.E.M.) for Computing Project

*Mentor*

Fall 2008 - Spring 2009

*Lincoln, NE*

## **TEACHING EXPERIENCE**

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UW Computer Science - CSE 311 - Discrete Math  
Tutor – 2015 - Present

## **ACADEMIC AWARDS & ACHIEVEMENTS**

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Member of Upsilon Pi Epsilon Computer Science Honor Society – 2008 - 2012  
Google Anita Borg Memorial Scholarship Finalist (One of 60 finalists out of 1200 applicants) – 2011  
CRA-W Grad Cohort Participant – 2011  
Google Diversity Award Recipient to attend ISSTA Conference – 2011  
Grace Hopper Celebration of Women in Computing Scholarship Recipient – 2010  
University of Nebraska - Lincoln Computer Science Cecilia Daly Scholarship – 2009 - 2010  
UCARE - Undergraduate Creative Activities and Research Experience Project Grant – 2009 - 2010  
Dean's List in College of Arts and Sciences – Spring 2007, Fall 2008, Spring 2010

## **UNDERGRADUATE AND GRADUATE INVOLVEMENT**

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ChickTech Seattle  
Workshop volunteer & mentor – 2015 - Present  
UW Graduate Women's Organization  
Mentor – 2015 - Present  
Upsilon Pi Epsilon  
Treasurer – 2010 - 2012  
Computer Science Graduate Student Association Board  
Member – 2011 - 2012  
Computer Science Department Curriculum Committee  
Graduate Representative – 2010 - 2012  
Kappa Phi Club (Christian Women's Organization)  
Founding member, Treasurer, and Assistant Sponsor – 2007 - 2012  
Circle K International (Community Service/Leadership Organization)  
Treasurer and Vice-President – 2007 - 2010