## Emerson A. Azarbakht

CONTACT INFO

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SPECIALTY

Research Scientist Skilled in Statistics, Machine Learning, & User Experience Design

NATIONALITY

Canadian Permanent Resident, Eligible to work in the U.S.

EDUCATION

Ph.D., Computer Science, Oregon State University

2011-2016

Longitudinal analysis & statistical modeling of collaboration graphs of software development

M.S., Computer Science, Chalmers University of Technology, Sweden

2009-2011

B.S., Computer Engineering, Azad University of Tehran

2004-2008

SKILLS

Programming: Java (expert), Python (proficient), R (expert), MATLAB (expert), C (proficient),

C++ (prior experience), Bash (prior experience)

Statistical Analysis: R (expert) Database: MySQL, Hive, Neo4j

Tools: Git, Hadoop, Gephi, Univa Grid Engine, Linux

EXPERIENCE

Data Science Research Assistant, School of Computer Science, Oregon State University

Software Engineering, Usability & Programming Languages Lab

Developed statistical models for changing social networks. (Think how your LinkedIn network has changed over time & what that says about you & your workplaces.)

User Experience Design Instructor, School of Computer Science, Oregon State University User Experience Design (CS 352) 2014-2016

Helped 985 post-baccalaureate students learn user experience skills, to switch into CS careers.

Brought 1.8 million dollars revenue to the department.

Data Structures Teaching Assistant, School of Computer Science, Oregon State University Data Structures (CS 261) 2012-2014

Wrote shell scripts to automate compilation, runtime and grading & helped students debug C code.

**PROJECTS** 

## A Statistical Approach for Modeling Change in Social Networks

2014

Developed a comparative approach to quantify social dynamics, found a well-fitting statistical model of covariates for longitudinal changes in social graphs.

## A Machine Learning Approach for Taming Compiler Fuzzers

2014

Developed a comparative cluster-ensemble approach to tame compiler fuzzers, improved state-of-theart, as our approach found more unique bugs than the state-of-the-art.

## An Augmented Reality Mirror: aMir

Developed a prototype of a augmented mirror to practice interaction design by doing. The project combined technical knowledge with design thinking.

**PUBLICATIONS** 

- Azarbakht, E. A., "Longitudinal Analysis of Collaboration Graphs of Forked Open Source Software Development Projects Using An Actor-oriented Social Network Analysis," Proc. Int'l. Net. for Social Net. Analysis conf., 2016.
- Azarbakht, E. A., "Longitudinal Analysis of Collaboration Graphs of Forked Open Source Software Development Projects," Proc. 12th Int'l. Conf. Open Source Systems Doct. Cons., 2016.

  Azarbakht, A. and C. Jensen, "Drawing the Big Picture: Temporal Visualization of Dynamic Collaboration Graphs of OSS Software Forks," Proc. 10th Int'l. Conf. Open Source Systems, 2014.

  Azarbakht, A. and C. Jensen, "Temporal Visualization of Dynamic Collaboration Graphs of OSS Software Forks," Proc.
- Int'l. Network for Social Network Analysis Sunbelt conf., 2014.
- Davidson, J, R. Naik, A. Mannan, A. Azarbakht, C. Jensen, "Investigating Older Adults' Experiences with Contributing to Free/Open Source Software," Proc. IEEE Symp. Visual Languages and Human-Centric Computing, 2014. Azarbakht, A., "Temporal Visualization of Collaborative Software Development in FOSS Forks," Proc. IEEE Symp. Visual
- Languages and Human-Centric Computing, 2014.
- Azarbakht, A., "Drawing the Big Picture: Analyzing FLOSS Collaboration with Temporal Social Network Analysis," Proc. 9th Int'l. Symp. Open Collaboration, 2013.
- Azarbakht, A. and C. Jensen, "Analyzing FOSS Collaboration & Social Dynamics with Temporal Social Networks," Proc. 9th Int'l. Conf. Open Source Systems Doct. Cons., 2013.

Graduate Courses

- Machine Learning
- Time Series Analysis
- Statistical Methods of Data Analysis
- Theory of Statistics I & II
- Stochastic Optimization

- Computer Vision
- Artificial Intelligence
- Algorithms & Data Structures
- Mobile & Cloud Software Development
- Qualitative & Quantitative Research Methods