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 *2011-present*
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 880 post-baccalaureate students learn user experience skills, to switch into CS careers.

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 statistcal 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-the-art, as our approach found more unique bugs than the state-of-the-art.

An Augmented Reality Mirror: aMir *2010*
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