Emerson A. Azarbakht

Contact Info

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Toronto, Canada
Canadian Permanent Resident

Specialty

Data Scientist skilled in Statistics & Machine Learning

Skills

Programming languages: **Python, Java, R, Matlab, C, C++, Bash**
Statistical Analysis: **R**
Databases: **MySQL, Neo4j, SQL, Cypher, Hive**
Data visualization tools: **D3.js, ggplot2**
Data Munging tools: **sed, awk, OpenRefine, Trifecta/Data Wrangler, R data.table, R dplyr**
Tools: **Git, Knitr, Shiny, Markdown, Linux, Hadoop, IPython, NumPy, Pandas, Matplotlib, Scikit-Learn**

Education

Ph.D., Computer Science, *Oregon State University*, USA *2011-2017*
Longitudinal analysis & statistical modeling of collaboration graphs of software development
M.S., Computer Science, *Chalmers University of Technology*, Sweden *2009-2011*
B.S., Computer Science, *Azad University of Tehran* *2004-2008*

Experience

Data Science Research Assistant, *School of Computer Science, Oregon State University*
Software Engineering, Usability & Programming Languages Lab *2011-2017*
Developed statistical models for changing social networks. (Think how *your* LinkedIn network has changed over time & what that says about you & your workplaces.)

Instructor, *School of Computer Science, Oregon State University*
Open Source Software Development (CS 464) *2017*
User Experience Design (CS 352) *2014-2016*
Helped 1,070 post-baccalaureate students switch careers and get CS jobs.
Developed a CS course for the OSU Online CS program. (Ranked #7 in the United States)
Brought 1.9 million dollars revenue to the department.

Graduate Teaching Assistant, *School of Computer Science, Oregon State University*
Data Structures (CS 261) *2012-2014*
Helped 500+ students debug C programs. Wrote Bash shell scripts to automate compilation, execution and grading

Projects

A Statistical Approach for Modeling Longitudinal Change in Social Networks *2014-2017*
Developed a comparative approach to quantify social dynamics, found a well-fitting statistcal model of covariates for longitudinal changes in social graphs of software development

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
- Artificial Intelligence
- Algorithms & Data Structures
- Mobile & Cloud Software Development