Sahar Mehrpour

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PROFILE

I am a graduate student pursuing PhD in Computer Science with an emphasis in Software Engineering.

I have experience in developing Stand-Alone Applications and Client-Server Web Applications in different environments and frameworks. I have participated in a couple of research projects and many course projects. Each of these projects required and applied different technologies such as NodeJs, React, Firebase, AWS, etc. I am adaptive and willing to learn new technologies and programming languages.

EDUCATION

PHD IN COMPUTER SCIENCE
George Mason University
2017-NOW | Fairfax, VA

MS IN COMPUTER SCIENCE
University of Manitoba
2014-2016 | Canada

MS IN COMPUTER SCIENCE
Sharif University of Technology
2011-2013 | Iran

BS IN COMPUTER SCIENCE
Sharif University of Technology
2007-2011 | Iran

SELECTED GRADUATE COURSEWORK

George Mason University
Secure Software Programming, Component-Based Software Development, User Interface Design and Development.
University of Utah
Machine Learning, Data Visualization.
University of Manitoba
Software Testing and Quality Assurance, Advanced Human-Computer Interaction (HCI), Advanced Data Mining.
Sharif University
Computer Organization, Analysis of Algorithms, Computational Geometry, Advanced Algorithms, Cryptology.

SELECTED PROJECTS

- **[Ongoing Research Project] Custom Tool for Java Developers:** In this project, we are designing and implementing a new tool, ActiveDocumentation, by which users can document their design decisions as they are coding. Our purpose is to provide incentives by providing instant feedback and encouraging users to document their design choices using this tool. We also designed and implemented a new user interface, RulePad, for writing design rules without the need for special skills. *Supervised by Thomas LaToza*. (JavaScript, Java, React, NodeJS, WebSocket, Bootstrap, Redux).
- **[Research Project] Clinical Data Visualization:** In this project, we visualized the clinical information of patients to help medical workers prescribe *medication* or *procedure* for a patient based on the clinical information of similar patients. *Supervised by Alexander Lex*. (TypeScript, Python, JavaScript, *D3.js*, Phovea Framework).
- **[Research Project] Topic Modeling Visualization:** In this project, we visualized the information of topic modeling on the publications of three conferences in Security and Privacy. https://saharmehrpour.github.io/TopicModeling/. (JavaScript, *D3* library, HTML, CSS).
- **[Course Project] Movie Visualization:** In this project, we visualize the information in a movie dataset consists of more than 5000 movies. https://saharmehrpour.github.io/dataviscourse-pr-MoviesVisualization/. (JavaScript, *D3* library, HTML, CSS).

SELECTED PUBLICATIONS

- **Mehrpour, S.**, LaToza, T. D. *Programming Tools for Working with Design Decisions in Code*, In the Annual Workshop on The Intersection of HCI and PL (PLATEAU), 2021.
- **Mehrpour, S.**, LaToza, T. D., Sarvari, H. *RulePad: Interactive of Authoring Checkable Design Rules*, In ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE), 2020.
- **Mehrpour, S.**, LaToza, T. D., Kindi, R. K. *Active Documentation: Helping Developers Follow Design Decisions*, In IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC), 2019.
- Bahoo, Y., Durocher, S., Keil J.M., Mondal, D., Mehrabi, S., **Mehrpour, S.** *Polygon simplification by minimizing convex corners*, In Theoretical Computer Science, 2019. *
- Durocher, S., **Mehrpour, S.** *Interference Minimization in k-Connected Wireless Networks*. In proceedings of Canadian Conference on Computational Geometry (CCCG), 2017. *
- Bahoo, Y, Durocher, S., **Mehrpour, S.**, Mondal, D. *Exploring Increasing-Chord Paths and Trees*. In proceedings of Canadian Conference on Computational Geometry (CCCG), 2017. *
- Bahoo, Y., Durocher, S., Keil, J. M., Mehrabi, S., **Mehrpour, S.**, Mondal, D. *Polygon Simplification by Minimizing Convex Corners*. In proceedings of International Computing and Combinatorics Conference (COCOON), 2016. *

* The authors are listed in the alphabetical order.

TECHNICAL SKILLS

- React.js (Proficient), Angular (Familiar)
- JavaScript, CSS, JAVA, HTML, (Proficient), Python, C/C++, TypeScript, JSF, JSP (Familiar)
- D3-V4, Bootstrap, Node.js, Redux.js (Proficient), Firebase, AWS (Familiar)