Negar Ghorbani

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Education		
	University of California, Irvine, Ph.D. Candidate in Software Engineering, Donald Bren School of Information and Computer Science (GPA: 3.98/4)	Jun 2022
	Sharif University of Technology, B.S. in Computer Engineering, Department of Computer Engineering	Jun 2016

Work Experience

Graduate Research Assistant   Sep 2016 - present

Software Engineering and Analysis Lab (SEAL), Conducting research in the area of Software Analysis and Testing Under supervision of (Dr. Sam Malek) and (Dr. Joshua Garcia) University of California, Irvine

- Darcy: Detection and Repair of Architectural Inconsistencies in Java
- Forecasting Architectural Decay from Evolutionary History
- Flair: Efficient Analysis of Android Inter-Component Vulnerabilities in Response to Incremental Changes
- Terminator: A Temporal Permission Analysis and Enforcement Framework for Android
- LetterBomb: Automatic Generation of Inter-Component Communication Exploits for Android Applications

Applied Scientist Intern   Mar - Sep 2021

Microsoft Research, Developer Division (DevDiv) Data & AI, Redmond, WA

- Conducting research in machine learning for automated software engineering
- Program merge conflict resolution via neural transformers

Software Engineering Research Intern   Jun - Sep 2020

Fujitsu Laboratories of America (FLA), Sunnyvale, CA

- Mining and fixing software bugs using crowd intelligence and unsupervised machine learning

Software Engineering Intern   Jun - Sep 2019

Morgan Stanley, New York, NY

- Designing and developing dynamic and static optimization methods in a framework for distributed and parallelized graph based calculations in Scala.

Research Assistant   Jun 2015 - Jul 2016

Institute for Studies in Theoretical Physics and Mathematics (IPM), Tehran, Iran

- Multi-Cloud TCPN: Modeling and Evaluation of Service Composition in Commercial Multi-Clouds using Timed Colored Petri Nets

Software Engineering Intern   Jan - Jul 2016

Pishtazan Andishe Pouya, Tehran, Iran

- Design and analysis of models for software information systems and web applications.

Software Developer   Jan - Dec 2014

VADA Future Communications,Tehran, Iran

Technology Skills	• Programming Languages: Java, Python, Android, Matlab, SQL Familiar with: Scala, C, C++ • Software Engineering: Program Analysis, Software Testing, Software Architecture, Agile, Scrum, Object Oriented Design Patterns • Web Development: Django, HTML, CSS, Javascript, JQuery, AngularJS • Tools: Soot Static Analysis framework, Intellij IDEA, Eclipse, Visual Studio, Android Studio
Awards	• Recipient of the first Richard N. Taylor Graduate Award in Software Engineering • National Science Foundation (NSF) travel award to attend ASE 2019 • SIGSOFT CAPS Travel grant to attend ICSE 2018, ACM SIGSOFT, 2018 • GHC Scholarship to attend Grace Hopper Celebration of Women in Computing, 2018 • Computing Research Association scholarship to attend the 2018 CRA-W Grad Cohort for Women, 2018 • Chair's Award, UC Irvine, 2016 • Graduate Dean's Recruitment Fellowship, UC Irvine, 2016

Publications

Conference Papers

- Joshua Garcia, Ehsan Kouroshfar, <u>Negar Ghorbani</u>, and Sam Malek, "**Forecasting Architectural Decay from Evolutionary History**", EEE Transactions on Software Engineering (TSE), 2021

- Hamid Bagheri, Jianghao Wang, Jarod Aerts, <u>Negar Ghorbani</u>, and Sam Malek, "**Flair: Efficient Analysis of Android Inter-Component Vulnerabilities in Response to Incremental Changes**", Empirical Software Engineering (EMSE) 2021

- <u>Negar Ghorbani</u>, Joshua Garcia, Sam Malek, "**Detection and Repair of Architectural Inconsistencies in Java**", International Conference on Software Engineering (ICSE), Montreal, QC, Canada, May 2019. (21% acceptance rate)

- Alireza Sadeghi, Reyhaneh Jabbarvand, <u>Negar Ghorbani</u>, Hamid Bagheri, Sam Malek, "**A Temporal Permission Analysis and Enforcement Framework for Android**", International Conference on Software Engineering (ICSE), Gothenburg, Sweden, May 2018. (21% acceptance rate)

- Joshua Garcia, Mahmoud Hammad, <u>Negar Ghorbani</u>, Sam Malek, "**Automatic Generation of Inter-Component Communication Exploits for Android Applications**", ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE), Paderborn, Germany, September 2017. (21% acceptance rate)

Journal Paper

- R. Entezari-Maleki, S.E. Etesami, <u>N. Ghorbani</u>, A.A. Niaki, L. Sousa, and A. Movaghar, "**Modeling and Evaluation of Service Composition in Commercial Multi-Clouds using Timed Colored Petri Nets**", to appear in the IEEE Transactions on Systems, Man, and Cybernetics: Systems

Notable Course Projects	• **ERP System:** A desktop based Enterprise Resource Planning system • **Simorgh Hotel Reservation System:** A web based hotel reservation system • **Pingu Search:** A search engine for information retrieval of a set of existing publications on researchgate.com. • **Secure E-Voting System:** A secure E-Voting protocol • **Simulation of Evolution:** A multi-thread simulation of the life and evolution in a visionary planet • **A Simple Compiler:** A compiler in JAVA programming language.
Volunteering & Service	• Member of Women in CyberSecurity (WiCyS) student chapter at UCI • Student Volunteer at International Conference on Software Engineering (ICSE) 2018 • Student Volunteer at Grace Hopper Celebration of Women in Computing 2017