Navid Salehnamadi

Email : nsalehna@uci.edu

https://navids.dev

EDUCATION

- **University of California, Irvine** — Irvine, CA
  Ph.D. in Software Engineering; GPA: 4.00 — *Oct. 2017 – Present*

- **Sharif University of Technology** — Tehran, Iran
  M.Sc. in Algorithms and Computation (Computer Science) — *Sep. 2015 – Aug 2017*

- **University of Tehran** — Tehran, Iran
  B.Sc. in Computer Engineering — *Sep. 2011 – Sep 2015*

EXPERIENCE

- **University of California Irvine** — Irvine, CA
  Graduate Research Assistant — *Oct. 2017 - Present*
  - Incorporated deep learning models to fix inaccessible icons in mobile apps
  - Designed and created novel testing techniques to detect 3 new categories of accessibility issues in mobile apps, unknown to existing accessibility testing techniques
  - Devised a scalable and accurate static analysis technique to detect event races, 12 times faster than existing tools

- **Microsoft** — Seattle, WA (Remote)
  Research Intern — *Jun. 2021 - Sep. 2021*
  - Designed a multi-level job caching mechanism, improved the response time +30 times faster than the baseline model
  - Implemented a scalable caching service using ASP.NET, CosmosDB, and Azure Storage

- **CafeBazaar** — Tehran, Iran
  Software Engineer — *Oct. 2015 - Aug. 2017*
  - Coordinated a number of teams (with 6 to 11 members) to create tools for Android app developers
    * Established a developers panel based on microservice architecture (using Django, Docker, and Kubernetes)
    * Redesigned an automated system to detect malware and low-quality apps, resulting in 4 times faster turnaround time
  - Inspected technical teams' performance issues at a company-wide level, leading to initiate a technical boot camp for entry-level developers

- **Sharif University of Technology** — Tehran, Iran
  Graduate Research Assistant — *May. 2016 - Aug. 2017*
  - **M.Sc. Thesis**: Invented a general approximation method for solving a family of geometry optimization problems (such as clustering) in the sliding window model processing streams of big data, with constant time query and low memory overhead

SKILLS

- **Programming Languages**: *Python, Java*, C#, SQL, Bash, C++

- **Technologies and Frameworks**: *Android, ASP.NET, Cosmos DB, Azure Storage, Docker, Soot*, Django, Keras, Pytorch, Rails

- **Software Engineering**: Agile (Scrum), Program Analysis, Test-Driven Development, Object-Oriented Design, Design Patterns

- **Notable Passed Courses**: Deep Generative Models, Machine Learning, Programming Deep Neural Network, Software Testing, Big Data Algorithms, Randomized Algorithms, Social Network Analysis

Publication

- Data-driven Accessibility Repair Revisited: On the Effectiveness of Generating Labels for Icons in Android Apps
  *Published in **ESEC/FSE 2021**, The ACM Joint European Software Engineering Conference
  and Symposium on the Foundations of Software Engineering*
  Forough Mehralian, <u>Navid Salehnamadi</u>, and Sam Malek

- Latte: Use-Case and Assistive-Service Driven Automated Accessibility Testing Framework for Android
  *Published in **CHI 2021**, Conference on Human Factors in Computing Systems*
  <u>Navid Salehnamadi</u>, Abdulaziz Alshayban, Jun-Wei Lin, Iftekhar Ahmed, Stacy Branham, and Sam Malek

- ER Catcher: A Static Analysis Framework for Accurate and Scalable Event-Race Detection in Android
  *Published in **ASE 2020**, 35th International Conference on Automated Software Engineering (23% acceptance rate)*
  <u>Navid Salehnamadi</u>, Abdulaziz Alshayban, Iftekhar Ahmed, and Sam Malek

- Test Automation in Open-Source Android Apps: A Large-Scale Empirical Study
  *Published in **ASE 2020**, 35th International Conference on Automated Software Engineering (23% acceptance rate)*
  Jun-Wei Lin, <u>Navid Salehnamadi</u>, and Sam Malek

- A Benchmark for Event-Race Analysis in Android Apps (Poster)
  *Published in **MobiSys 2020**, 18th International Conference on Mobile Systems, Applications, and Services*
  <u>Navid Salehnamadi</u>, Abdulaziz Alshayban, Iftekhar Ahmed, and Sam Malek

Awards

- **Bob & Barbara Kleist Endowed Graduate Fellowship** — 2021
- **The Sigma Xi Grants-in-Aid of Research** — 2021
- **Summer Inclusive Excellence Grant** - University of California, Irvine — 2021
- **Noyce Fellow** - University of California — 2021
- **Chair's Award** - UCI, School of Informatics and Computer Science — 2017
- **ACM Student Chapter Excellence Award** - Outstanding School Service — 2015
- **Golden Medal** in Iran Nationwide Scientific Olympiad - Computer Science — 2014
- **ACM** International Collegiate Programming Contest **Top 10 Teams** of west Asia region — 2013
- **Silver Medal** in Iran National Olympiad in Informatics — 2010
  The final step to world-final International Olympiad in Informatics

Notable Side Projects

- Soot Tutorial   A series of tutorials with visualization to learn static program analysis using **Soot**
- IOI Translation   Developed a translation framework, used in the International Olympiads in Informatics, 2017-2020
- DM Contest   Designed and built an online contest platform to apply active learning techniques for mathematic courses

Peer-Review Service

- ACM Transactions on Software Engineering and Methodology (TOSEM) — 2021
- IEEE International Conference on Software Architecture (ICSA) — 2021
- Computing: Archives for Scientific Computing (COMP) — 2021
- Grace Hopper, Software Engineering Review Committee — 2020-2021
- European Conference on Software Architecture (ECSA) — 2019-2020

Leadership Experience and Community Involvement

- External Liaison, Resident Council of Graduate Housing at UCI — 2021-2022
- Coordinator, Student Journal Club on Software Engineering and Machine Learning at UCI — 2020-2021
- Live! Virtualization Team Member, International Conference on Software Engineering — 2020
- Technical Organizer, International Olympiad in Informatics — 2017
- Chief editor, F1 the scientific journal of the ACM student chapter of University of Terhan — 2015
- Vice-chair, the ACM student chapter of University of Terhan — 2014-2015
- Team Leader, Robocup Rescue Simulation, Allame Helli high school, Tehran — 2011-2012