

# Hamed Gorjiara

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## EDUCATION

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### University of California, Irvine

GPA: 4.0/4.0

*Ph.D. in Computer Engineering*

*Jun 2018 – Jun 2022*

- Developed an efficient model checker and a test framework for persistent memory programs. The model checker simulates the processor and explores executions to identify concurrency and crash consistency bugs, and automatically suggests code changes to fix them. The test framework verifies that the c++ compiler's optimizations do not cause crash consistency bugs. The implemented frameworks are used in testing in-memory databases, file systems, and etc. Written in C/C++ and used LLVM compiler to automatically annotate memory accesses.
- H. Gorjiara, W. Luo, A. Lee, H. Xu, B. Demsky. Checking Robustness to Weak Persistency Models. PLDI 2022
- H. Gorjiara, H. Xu, B. Demsky. Yashme: Detecting Persistency Races. ASPLOS 2022
- H. Gorjiara, H. Xu, B. Demsky. Jaaru: Efficiently Model Checking Persistent Memory Programs. ASPLOS 2021

### University of California, Irvine

GPA: 3.9/4.0

*M.S. in Computer Engineering*

*Aug 2016 – Jun 2018*

- Implemented an optimization framework to solve constraints captured as semi-linear expressions by a domain specific language (DSL), and convert them to an optimized Boolean Satisfiability problem. Developed 20k lines of C++ code with advanced features such as guided parallel parameter tuning using Machine Learning techniques.
- H. Gorjiara, H. Xu, B. Demsky. Satune: Synthesizing Efficient SAT Encoders. OOPSLA 2020
- **Courses:** Machine Learning, Program Analysis, Operating Systems, Distributed Systems, Multicore Programming

### University of Tehran

GPA: 3.7/4.0

*B.S. in Computer Engineering*

*Aug 2012 – Jun 2016*

- Built and optimized a Cassandra (NoSQL DB) cluster for Big Data usages in our school
- **Courses:** Algorithm, Database, Networks, Security, Internet Eng, Software Eng, Data structures

## EXPERIENCE

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### Google

Jun 2022 – Now

*Software Engineering*

*Los Angeles, CA*

- Developing the next-generation verification software in Google Cloud to automatically detect anomalies and recommend the corresponding solutions to avoid outages. This framework leverages AI to correlate events and patterns of monitoring incidents to their root cause. In addition, I designed and developed a novel E2E testing language with automated load testing, enhancing system robustness and increasing the productivity of developers.

### Google

Sep 2021 – Dec 2021

*Software Engineering Intern*

*Irvine, CA*

- Designed and implemented a model to simulate and verify reachability among two instances in Google Cloud Network without physically transferring internet packets between them. The project aimed to automatically test firewall and routing misconfigurations in large scale Google Cloud Network and suggest the correct configurations to the users. My contributions include backend development, API design, unit testing, and integration testing with Google's internal tools. The implemented prototype was orders of magnitude faster than the existing framework.

## AWARDS AND CERTIFICATES

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- 2021** My Ph.D. projects awarded **Half-Million Dollars** by National Science Foundation (NSF)
- 2021** Awarded certificates in Network, Machine Learning, Artificial Intelligence, and Data Science from Google
- 2020** Awarded certificates for React, React Native, Redux, Node.js, and Javascript from codewithmosh.com
- 2017** Ranked first on UCI Kaggle Machine Learning competition to predict rainfall from satellite pictures
- 2016** Five year financial support from University of California, Irvine and National Science Foundation (NSF)
- 2016** Ranked 2nd among HW students in University of Tehran

## TECHNICAL SKILLS

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**Programming:** C (5 years), C++ (8 years), C# (1 year), JAVA (4 years), Python (5 years), Javascript (4 years), CSS (4 years), HTML (4 years), NodeJS (4 years), Bash (7 years)

**Frameworks:** AWS (3 years), DynamoDB (3 years), React (3 years), Git (8 years), React-Native (1 year), Hibernate (2 years), Spark (2 years), MySQL (4 years), JUnit (2 years), Jest (3 years), Selenium (2 years)