

Siwei “Robert” Li

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Education

Georgia Institute of Technology, Atlanta, GA
B.S. in Computer Science (GPA: 3.87/4.0)

2016 - (Expected) 2020

Experience

Google, San Francisco, CA
Software Engineering Intern

Summer 2019

Built an RPC service and a web application adding explainability to a machine learning anomaly detection model in order to generate intuitive alerts for abnormal enterprise Google Doc access.

Georgia Institute of Technology, Atlanta, GA
Undergraduate Research Assistant, School of Computational Science and Engineering

Fall 2017 - Present

Advisor: Prof. Duen Horng (Polo) Chau

Member of the Polo Club of Data Science, where I innovate at the intersection of **data science and human-computer interaction (HCI)** to synthesize scalable, interactive, and interpretable tools that amplify human's ability to understand and interact with big data.

Panasonic Automotive Systems, Peachtree City, GA
Software Engineering Intern

Summer 2017

Developed an extensible analytics tool in **Java/Electron/React/d3** that enables engineers to create automated sequences that generate various analysis reports; estimated to **reduce 30% of testing time**.

Selected Publications

Shield: Fast, Practical Defense and Vaccination for Deep Learning using JPEG Compression

KDD'18

Nilaksh Das, Madhuri Shanbhogue, Shang-Tse Chen, Fred Hohman, **Siwei Li**, Li Chen, Michael E. Kounavis, Duen Horng Chau
ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD). Aug 19, 2018. London, UK.

Track: Applied Data Science **Audience Appreciation Award Runner Up**

Selected Projects

Intel MLSPloit, *Adversarial Machine Learning Research Platform*

Fall 2018 - Spring 2019

Developed an extensible research platform for security and ML researchers to interactively construct transformation and evaluation pipelines.

NIH mHealth Visual Discovery Dashboard, *Part of NIH's MD2K (Mobile Sensor Data-to-Knowledge) Initiative*

Spring - Fall 2018

Developed an analytics dashboard for timeseries health data collected from mobile devices using Kotlin and React. Integrated into Cerebral Cortex Data Analytics Platform, a \$11.8M project by **NIH MD2K Center of Excellence**.

Argo Graph, *Large-scale Graph Visualization Tool*

Fall 2017 - Present

Developing the next cross-platform interactive graph visualization tool capable of handling **million-edge** scale network data using WebGL, Node, and SQLite. Argo is used in **CSE 6242 Data and Visual Analytics** course, that **teaches over 1000 students** per year.

Selected Personal and Open Source Projects

NSF Smart Meter Data Portal: Searchable Github-based data-sharing platform for energy researchers

Spring 2018

HackGT/SponsorshipPortal: Intelligent portal for hackathon sponsors to search resumes of participants

Fall 2017 - Fall 2018

On-campus Activities

VIP Project: Health Informatics on FHIR, Atlanta, GA
Development Team Lead

Fall 2018 - Fall 2019

Develop FHIR applications to improve Emergency Room and Triage efficiency. Currently working with Grady Memorial Hospital, the fifth-largest public hospital in the US, with one of the busiest ER in the country.

HackGT Organizers Team, Atlanta, GA

Spring 2017 - Fall 2019

*Organizing **Largest** College Hackathon in the Southeast (1000+ Students)*

Hold hackathons and workshops; make open source projects for event organizers; mentor beginners and high school students.

Selected Skills

Languages: Java, Python, JavaScript (ES6+), TypeScript, Kotlin, Swift, C++, SQL, Bash, PHP, Go

Web: React, Redux, Node/Express, Electron, Django, Flask, Codelgniter, HTML, CSS, JQuery

Mobile: Android, Cordova, iOS/ARKit

Data Science: Machine Learning (scikit-Learn, Tensorflow, numpy, pandas), Data Visualization (D3, matplotlib)

Miscellaneous: Infrastructure (Docker, Kubernetes, Vagrant), Build Systems (Gradle, Webpack, Travis CI)