

# Siwei “Robert” Li

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## Education

**Georgia Institute of Technology**, Atlanta, GA  
*B.S. in Computer Science (GPA: 3.88/4.0) Highest Honor*

2016 - 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

Fall 2017 - Present

*Undergraduate Research Assistant, School of Computational Science and Engineering*

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

Summer 2017

*Software Engineering Intern*

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

Fall 2018 - Fall 2019

*Development Team Lead*

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)