Siwei "Robert" Li

Looking for Summer 2019 Software Engineering Internship

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Education

Georgia Institute of Technology, Atlanta, GA — *Fall 2016 - (Expected) Spring 2020*
B.S. in Computer Science (GPA: 3.88/4.0)

Experience

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**.

Georgia Institute of Technology, Atlanta, GA — *Spring 2017*
Research Experiences for Undergraduates (REU), School of Interactive Computing
Mentor: Prof. Mark Guzdial
Improved and extended Runestone Interactive - an open-source K-12 interactive ebook platform for teaching computer science used by **500+ institutions** around the world.

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**

Compression to the Rescue: Defending from Adversarial Attacks Across Modalities — *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: Project Showcase

Selected Projects

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.

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**.

Smart Meter Data Portal, *Part of NSF Smart Grid Data Analytics Spoke Project* — *Spring 2018*
Designed and developed a searchable and freely hostable web-based data-sharing platform leveraging Github and Travis CI, for energy researchers using Smart Grid.

Selected Activities

HackGT Organizers Team, Atlanta, GA — *Spring 2017 - Present*
*Organizing **Largest** College Hackathon in the Southeast **(1000+ Students)***
Member of the HackGT organization where we organize various hackathons and workshops at Georgia Tech. I build open source software for hackathon organizers worldwide, while teaching computer science and web development through events for beginners and high school students in underrepresented communities.

Selected Personal and Open Source Projects

HackGT/SponsorshipPortal: Intelligent portal for hackathon sponsors to search resumes of participants — *Fall 2017 - Fall 2018*
Beginners-Cordova-Tutorial: Website teaching Apache Cordova development to beginners, written in Sphinx — *Spring 2017*
V-Plate: Voice-controlled food delivery robot built with RaspberryPi 3 with an Android client — *Spring 2017*

Skills

Languages: Java, Python, JavaScript (ES6+), Kotlin, Swift, C, C++, SQL, Bash, PHP, Go
Web: React, Redux, Node/Express, Electron, Django, Flask, CodeIgniter, HTML, CSS, JQuery
Mobile: Android, Cordova, iOS/ARKit
Data Science: Machine Learning (scikit-Learn, Tensorflow), Data Visualization (D3, matplotlib)
Miscellaneous: Infrastructure (Docker, Vagrant), Build Systems (Gradle, npm, Webpack, Travis CI)