Siwei “Robert” Li

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Education

Fall 2016 - Present

Georgia Institute of Technology, Atlanta, GA
B.S. in Computer Science (GPA: 3.88)
Expected Graduation: May 2020

Industry Experience

Summer 2017

Panasonic Automotive Systems, Peachtree City, GA
Software Engineering Intern
Developed an extensible visualization tool in React/Redux/Node/d3 that enables engineers to create automated sequences that generate various analysis reports; estimated to reduce 30% of testing time.

Academic Research Experience

Fall 2017 - Present

Georgia Institute of Technology, Atlanta, GA
Undergraduate Research Assistant, School of Computational Science and Engineering
Advisor: Polo Chau
Member of the Polo Club of Data Science, where we innovate at the intersection of data mining and human-computer interaction (HCI) to synthesize scalable, interactive, and interpretable tools that amplify human’s ability to understand and interact with big data.

Spring 2017

Georgia Institute of Technology, Atlanta, GA
Research Experiences for Undergraduates (REU), School of Interactive Computing
Mentor: Mark Guzdial
Member of the Contextualized Support for Learning Lab, where we develop interactive technologies for K-12 Computer Science education.

Publications

KDD'18

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

KDD'18

Compression to the Rescue: Defending from Adversarial Attacks Across Modalities
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

Ongoing Projects

Spring 2018 - Present

mHealth Visual Discovery Dashboard, *Part of NIH's MD2K (Mobile Sensor Data-to-Knowledge) Initiative*
Developing a predictive visualization dashboard for timeseries data collected from mobile devices.

Fall 2017 - Present

Argo Graph, *Large-scale Graph Visualization Tool*
Developing the next cross-platform interactive graph visualization tool capable of handling million-edge scale network data using latest web technology.

Selected Past Projects

Spring 2018

Smart Meter Data Portal, *Part of NSF Smart Grid Data Analytics Spoke Project*
Designed and developed a web-based data-sharing platform for energy researchers using Smart Grid.

Spring 2017

Runestone Interactive Ebook, *Help students learn CS interactively*
Improved an open-source K-12 interactive ebook platform for teaching computer science used by 500+ institutions around the world.

Selected Activities

Spring 2017 - Present

HackGT, Atlanta, GA
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

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

Skills

Languages Java, Python, JavaScript (ES6+), Kotlin, Swift, C, C++, PHP, SQL, Bash
Web React, Redux, Node/Express, Electron, 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)