

# Siwei “Robert” Li

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## Education

Fall 2016 - Present **Georgia Institute of Technology**, Atlanta, GA  
*B.S. in Computer Science*  
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

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

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.

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.

## 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.

## 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.

## Skills

Languages	Java, Python, JavaScript (ES6+), Kotlin, Swift, C, C++, PHP, SQL
Web	React, Redux, Node/Express, Electron, Flask, CodeIgniter, HTML, CSS, JQuery
Mobile	Android, Cordova, iOS/ARKit
Machine Learning	Scikit-Learn, Tensorflow
Data Visualization	D3, matplotlib
Miscellaneous	Docker, Bash, Gradle, Travis CI