MINGHAO LI

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EDUCATION

Harvard University
Ph.D., Computer Science **Aug 2021 – Present**

Cornell University
Bachelor of Science, Computer Science **Aug 2017 – May 2021**
summa cum laude

RESEARCH INTERESTS

Systems and Networking, Security and Privacy, Artificial Intelligence

PUBLICATIONS

Wu, H., Tian, X., **Li, M.**, Liu, Y., Ananthanarayanan, G., Xu, F. & Zhong, S.
PECAM: Privacy-Enhanced Video Streaming & Analytics via Securely-Recoverable Transformation
International Conference on Mobile Computing and Networking (MobiCom'21)

Wu, H., Tian, X., Gong, Y., Su X., **Li, M.** & Xu, F.
DAPter: Preventing User Data Abuse in Deep Learning Inference Services
The Web Conference (TheWebConf'21)

PRESENTATIONS

Analyzing the Security of Smart Contracts Using Neural Networks
ASEE 2021 St. Lawrence Section Conference

RESEARCH & RELATED EXPERIENCE

Ph.D. Student (Advisor: Minlan Yu) **Aug 2021 – Present**
Computer Science Department, Harvard University, Cambridge, MA

- Currently working on machine learning systems. Also investigating efficient path planning for drones.

Research Assistant (Advisors: Elaine Shi, Robbert Van Renesse) **May 2019 – May 2021**
Computer Science Department, Cornell University, Ithaca, NY

- Accomplished a research project on recovering the business logic of smart contracts from function model graphs using neural networks. Concluded that the technique was promising but would not outperform existing methods much by relying on static information only. The conclusion led to the idea of incorporating dynamic information into smart contract analysis.
- Funded by the College of Engineering Undergraduate Research Funds Summer 2020 to work on the privacy-enhanced video streaming and analytics system PECAM. PECAM makes recoverable video transformation that eliminates visual details while maintaining enough information for the analytics tasks.

- Worked on the DApps (decentralized applications, which are applications that run on decentralized networks such as blockchains) security tool DAPPSCOPE, which automatically discovers the discrepancy between the UI of a DApp and its contract code. Defined the high-level specifications used by DAPPSCOPE to check against a DApp's business model graphs. Researched the top 100 DApps on *Dapp.com Ranking* to ensure the real-life coverage of DAPPSCOPE. Collected 22 DApps for evaluation. Examined the evaluation results and recorded 17 novel safety issues found by the tool.
- Researched on constructing graphs from Ethereum data and applying node classification algorithms to the graphs. Evaluated the algorithms' performances by checking whether they computed potentially malicious nodes as similar.

Research Engineer Intern **June – Aug 2018**

Baidu, Inc., Beijing

- Read and discussed Machine Learning papers with the mentor. Solved Machine Learning problems such as predicting the possibility of survival of individuals in a disaster and small-scale facial recognition by applying the algorithms in the papers. Wrote presentations about Machine Learning.

TEACHING EXPERIENCE

Course Consultant – Operating Systems **Fall 2020, Spring 2021**

Computer Science Department, Cornell University, Ithaca, NY

- Held weekly office hours to help students comprehend course materials and complete homework. Developed homework and handouts. Supervised study groups. Graded homework and exams.

Course Consultant – Discrete Structures **Fall 2018**

Computer Science Department, Cornell University, Ithaca, NY

- Held weekly office hours to help students comprehend the materials and develop sound proofs. Graded homework and exams.

LANGUAGES

- Chinese: Native language.
- English: Speak fluently and read/write with high proficiency.

HOBBIES & INTERESTS

- Exercising: Do sit-ups/curl-ups and push-ups almost every day for more than 7 years. Jog outside whenever my schedule and the weather permit.
- Going to the movies: Have been a huge fan of movies for 15 years.
- Broadway: Go to a Broadway show almost every time I travel to New York City.
- Cleaning: A bit obsessed with a clean and tidy environment.