

EDUCATION

- Ph.D., Computer Science** 2018 - now
University of Southern California (USC)
GPA: 3.78/4.0
- B.E., Computer Science** 2013 - 2017
University of Science and Technology of China (USTC)
GPA: 3.84/4.3 Rank: 7/109

PROJECT EXPERIENCE

- Verifying the Robustness of KNNs against Data-Poisoning Attacks** 2019 - 2020
- Proposed a method for soundly over-approximating the KNN behaviors during both parameter tuning and prediction phases under data-poisoning attacks
- Developed optimizations to prune the search space while maintaining accuracy
- Experiments show the high accuracy and high efficiency of our methods on both small and large datasets
- Constraint-Based Precomputation on Energy-Harvesting Devices** 2018 - 2019
- Developed a sound static analysis to identify precomputation opportunities
- Used an SMT solver based method to optimize the precomputation policy
- Applied a semantic-preserving transformation to generate the optimized program
- Implemented our method in the LLVM compiler
- Game: Cooking Journey** 2019
- Wrote a game, Cooking Journey, combining both cooking and racing games using Unity
- Collaborated with other three students
- Invited by Prof. Mike Zyda to attend USC Games Showcase
- Privacy-Preserving Image Trading through Crowdsourcing** 2016 - 2017
- Led a five-member team
- Designed a privacy-aware image trading system based on crowdsourcing
- Designed an image selection method based on the CNN model
- Minimized computation and communication overhead in both servers and clients sides
- Experiments show the high quality of our selected datasets and the high efficiency of our methods

SELECTED PUBLICATION

- Constraint-Based Analysis for Energy Optimization via Precomputation
Yannan Li, Chao Wang (*Under Submission*)
- Verifying the Robustness of KNNs against Data-Poisoning Attacks
Yannan Li, Jingbo Wang, Chao Wang (*Under Submission*)
- CrowdBuy: Privacy-friendly Image Dataset Purchasing via Crowdsourcing
Lan Zhang, **Yannan Li**, Xiang Xiao, Xiang-Yang Li, Junjun Wang, Anxin Zhou, Qiang Li
IEEE International Conference on Computer Communications (INFOCOM' 18)

TECHNICAL SKILLS

Programming Languages	C, C++, Python, Java, Shell, Verilog HDL, TensorFlow, HTML
Compile	LLVM, Java Soot (Static Analysis, Program Transformation)
Verification/Synthesis	Z3 (SAT/SMT Solver), SyGus (Program Synthesis)
Game Engine	Unity