Jingchang Sun

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Education

Tsinghua University Sep 2016 - June 2021 (expected)

M.S. in Computer Science, Institute for Interdisciplinary Information Sciences (IIIS)

Beijing

- Adviser: Prof. Pingzhong Tang, Thomas Moscibroda
- Research Area: Blockchain, Network Science, Machine Learning

Sichuan University Sep 2012 - June 2016

B.S. in Computer Science, College of Computer Science

Chengdu

- GPA: 3.6/4.0 (Top 2% of Department)

Researches & Publications

Games of Miners

First author. Accepted by AAMAS'2020 (A-level-conf. in IIIS list). Patent pending.

- Derived closed-form Nash and Stackelberg equilibria for cryptocurrency mining game;
- Showed optimal mining strategies and the effect on blockchain system security. (PDF)

Nebulas Technical White Paper

Core contributor to the major technical report of a cutting-edge public blockchain. Open in July, 2017.

- Proposed and evaluated ranking algorithms for blockchain addresses based on centrality;
- Applied the proposed ranking algorithms on blockchain consensus, searching and recommendation systems. (PDF)

Algorithms for Computing the WCRT bound of OpenMP Task Systems with Conditional Branches

Third author. Accepted by IEEE TC (A-level-journal in IIIS list)

- Developed tools to generate and visualize task graphs for both realistic and artificial OpenMP source programs.

Integer Programming Approach for Schedulability of Sporadic Real-Time Systems

Second author. Published in Journal of Software (2017)

- Solved MIP formation of real-time system schedulability problem by LP relaxations;

Projects & Experiences

Bing Ads Next Generation Billing System Microsoft

- Redesigned config manager with dynamic updating; Developed services circuit breakers. May 2020 - Aug 2020
- Designed UGC plagiarism detection pipeline, achieving nearly SOTA performance

Reliable Luxury Traceability Blockchain (patent pending) TuringSense

- Designed DApp to identify, trace, and trade luxuries, developed websites & smart contracts. Sep 2019 - Dec 2019
- Studied real object identification based on microscope picture and SIFT. (demo)

Crypto-asset Graph Data Analysis Microsoft Research

- Collected Ethereum blockchain data and built multiple user/transaction/call networks; Oct 2017 - Feb 2018
- Computed measurements of networks and analyze users' behavior using GNN models.

PrePer: Characterizing Student Performance via Large-scale WiFi Networks Tsinghua University

- Collected campus WiFi logs and built pipelines to analyze large-scale data; Nov 2016 - May 2017
- Predicted student behaviors using decision trees and provided helpful insights.

Etherlend — A Decentralized Rotating Savings and Credit Association (A DeFi App) Tsinghua University

- Led the project, developed smart contracts and the Android App. (demo) Nov 2016 - Dec 2016

Fingertip — A Heart Rate Monitor App Sichuan University

- Led the development and designed signal processing algorithms. (demo) Jan 2016 - May 2016

Awards

National Scholarship & First-Class Scholarship Nov 2014

First & Second Prize of the 16th National Robot Competition July 2014

Skills

Language Proficiency: TOEFL: 105/120 | GRE: 318/340 | CET6: 555/710

Programming: Python, C, Java, C#, Scala, MATLAB, Mathematica, R, Gurobi, Go, Solidity, Swift