WANG, YUJIE (JAYE)

Skype: 2503734534@qq.com ▪ +8615063082657 ▪ ywanggm@ust.hk

EDUCATION

WASHINGTON UNIVERSITY IN ST. LOUIS (WUSTL) **ST. LOUIS, USA**
PhD student, Computer Science *Fall 2021- Spring 2026*

THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY (HKUST) **HONG KONG**
BS in Data Science and Technology with First Class Honor (Expected) *Fall 2017- Spring 2021*

WASHINGTON UNIVERSITY IN ST. LOUIS (WUSTL) **ST. LOUIS, USA**
International Student Research Internship Program *Summer 2020*

THE UNIVERSITY OF SOUTHERN CALIFORNIA (USC) **LOS ANGELES, USA**
International Student Exchange Program *Spring 2020*

RELEVANT COURSES

- **COMP**: Practicing Cybersecurity, System and Kernel Programming in Linux, Machine Learning, Full Stack Web Development, Compiler Development, Computer Network, Computer Organization
- **MATH**: Regression Analysis, Probability and Statistical Inference, Game Theory, Real Analysis

RESEARCH EXPERIENCE

"PRIVACY-PRESERVING PROGRAM ANALYSIS WITH HOMOMORPHIC ENCRYPTION"
Final Year Thesis *Aug 2020 – Present*

- Demonstrate the feasibility of analyzing encrypted program with Homomorphic Encryption
- Design algorithms of adopting Homomorphic Encryption to Pattern Matching, Program-Embedding-Based Similarity Analysis and Code Coverage Analysis
- Analyze complexity of the proposed algorithms
- Supervised by Prof. WANG Shuai, Department of Computer Science & Engineering, HKUST

"LARGE-SCALE EVALUATION OF THE SECURITY OF COMPUTER-AIDED DIAGNOSIS ALGORITHMS"
International Student Research Internship Program at Washington University in St. Louis *May 2020 – Present*

- Implement multiple attacks targeting existing CADs with proposed real-world scenarios, where the attackers can cause misdiagnosis or leakage of patients' information
- Experiment the efficiency of multiple defenses and give out advise to help secure the CADs
- Supervised by Prof. ZHANG Ning, Department of Computer Science & Engineering, WUSTL

As a core researcher in this summer research project, I am targeting a top tier cybersecurity paper. This project is aimed at demonstrating real-world threats towards existing medical AI systems, and give out advise to help secure the CADs.

"IMPROVEMENT OF AN APPROXIMATED SELF-IMPROVING SORTER AND ERROR ANALYSIS OF ITS ESTIMATED ENTROPY"
Undergraduate Research Opportunity Program, HKUST *Sep 2019 – Dec 2019*

- Designed a generalized algorithm to extend existing self-improving sorters
- Implemented the sorter and compared the experiment result with theoretical values
- Completed a draft as the first author
- Supervised by Prof. CHENG Siu-wing, Department of Computer Science & Engineering, HKUST

WORK EXPERIENCE

UNIVERSITY OF BRISTOL **UK**
Summer Research Internship – Biological Statistic *Jun 2019 – Sep 2019*

- Initiated research project: "Identifiability of IBS and PBWT for Demographic Reasoning"
- Proposed a statistical approach to extract informative signals from large genetics data for demographic reasoning
- Conducted research to study the informatics difference between IBS and PBWT
- Reconstructed the population structure from population genetics data using nonparametric regression method
- Supervised by Dr. Feng YU and Dr. Daniel Lawson, Department of Mathematics, University of Bristol

AWARDS & HONORS

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- *Scholarships*: University's Scholarship for Continuing UG Students, HKUST Admission Scholarship, Overseas Exchange Scholarship, Hong Kong & Qingdao Association Scholarship
- *Awards*: The Epsilon Fund Award in 2019, HKUST Outstanding Academic Performance Award
- *Honors*: First Class Honor (Expected)

SKILLS & INTERESTS

- *Technical*: Kernel Programming, Ethical Hacking, Full Stack Web Development
- *Languages*: English (Fluent) and Mandarin (Native)
- *Interests*: Cybersecurity, System Building