Xi Jiang

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EDUCATION

Colgate University, Hamilton, NY — Expected 5/2021
Bachelor of Arts
Double Major: Computer Science | Economics
Senior Thesis in Computer Science, advised by Professor Aaron Gember-Jacobson
Cumulative GPA: 3.59/4.00
Computer Science GPA: 3.90/4.00

Yonsei University, Seoul, Korea — Fall 2019
Study Abroad

RESEARCH EXPERIENCES

Practical Bug Detection in Software Implementations of Routing Protocols
Research Assistant, Colgate University, Department of Computer Science, 5/2020-Present
Advisor: Professor Aaron Gember-Jacobson
Focused on automated network protocol verification. Created a tool that can look at both information logged by routers and the control packets exchanged by routers with respect to the 51 rules we compiled from the standards document of OSPF to verify that most observable rules in terms of packet verification and event verification are being followed.

Senior Thesis: Non-interoperability in Routing Protocol Implementations
Self-initiated, 8/2020-Present
Advisor: Professor Aaron Gember-Jacobson
Investigating non-interoperability among different implementations of the same routing protocol. Discovering and mitigating potential non-interoperability among different open-source OSPF implementations by identifying the set of packets that one implementation can send but other receiving implementations consider non-compliant.

Independent Research: Interaction Testing
Research assistant, 2/2020-Present
Advisor: Professor Ryan Dougherty - United States Military Academy at West Point
Analyzed the effects of changes in the parameters on random covering array probabilities. Engaged in density method coverage maximization bounded by covering array size generated by random method.

“Continuous Interaction Testing”, 2021 Genetic and Evolutionary Computation Conference (Accepted)
Co-organizer
Described the covering array existence problem with a focus on continuous covering arrays where each entry is a real number and has a property depending on a Euclidean distance function.

“Permutation Representation of Covering Arrays”, 2021 International Conference on Software Engineering - Genetic Improvement of Software Workshop (Submitted)
Co-author
Investigated alternate (permutation) representations of covering arrays and minimized the expected number of tests to run before fault appears by computing the optimal permutation order using genetic algorithms.

WORK EXPERIENCES

Red Pulse
Tier 1 Research Analyst, 5/2019-Present
Worked at Red Pulse, a new market intelligence platform focusing on providing China market research and intelligence for individual investors and financial advisors. Gathered and analyzed up to 240 pieces of major technological and financial

information in the Chinese market. Assisted full time workers in producing 2Q19 report for the Chinese telecom industry.

Yinlang Limited

Intern, 6/2018-8/2018

Assisted in writing integrated app which runs on Wechat that records user activities and progresses towards designated objectives. Utilized algorithms to analyzed user data to generate an activity schedule that maximized the rate of exposure for the integrated app to the users.

Staubli Robotics

Intern, 8/2015-5/2016

Studied and assisted in writing robotic devices specific programs and code segments using assembly language to utilize the functionalities of the machines. Gained insight of object-oriented programming languages aiming to improve device accuracy and efficiency.

HONORS AND AWARDS

Dean's Award with Distinction for Academic Excellence (2020 – Present)
Dean's Award for Academic Excellence (2017-2019)
Staubli Robotics Outstanding Intern Award (2016)
Second Place Award in Division 1 Clemson Calculus Challenge (2016)
Outstanding Delegate Award for SC Model Arab League (2016)
Furman Scholar (2015)
Wofford Scholar (2015)

RELEVANT COURSEWORK

Security/Privacy/Society, Algorithm Analysis, Theory of Computing, Discrete Structures, Interaction Testing, Computer Organization, Operation System, Introduction to Computer Science I & II, Game Theory, Introduction to Statistics, Calculus III

EXTRACURRICULAR ACTIVITIES

Colgate Coders, Colgate University, Member (Fall 2017-Present)
Colgate Finance Club, Colgate University, Member (Fall 2017-Present)
Colgate Brown Commons Large Part Committee, Chair, (Fall 2017-Spring 2018)
Math Competition Club, Spartanburg Day School, President (Fall 2014-Spring 2017)

TECHNICAL SKILLS

Programming Languages/OSs: Java, Python, C, C++, Swift, MIPS/ARMv8, HTML, R, Linux, Mac OS, and Windows
Applications/Platforms: Docker, Logisim, Stata
Languages: Chinese (Native), Korean (Beginner)