Hao Zhou

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EDUCATION

Columbia University   New York, NY

M.S. in Computer Science, GPA: 4.0/4.0   Expected Dec 2022

- Relevant Courses: SaaS, Parallel Functional Programming, Artificial Intelligence, Compiler

Syracuse University   Syracuse, NY

B.S. in Computer Science, GPA: 4.0/4.0   Dec 2018

- Honors: Summa Cum Laude, Deans List, The Louis D. Martini Award for Outstanding Design Project

WORK EXPERIENCE

Nokia   Hangzhou, CN

Software Developer & DevOps Assistant   Sep 2020 - Aug 2021

- Developed 8 front-haul telecom main features for Layer One software; expanded Unit Tests and System Component Tests, resulting in over 95% test coverage and strong quality assurance for whole system
- Performed 2 major and 10 minor Code Refactoring via C++ and assembly, leading to 15% speed up overall.The most impressive one is 23% faster speedup for U-plane packets sending, 40 μs to 30.8 μs, 30000 instructions were cut down
- Monitored continuous integration and provided maintenance/fix for problematic system component testing cases to ensure stability of CI procedure, leading to a case fail rate less than 0.3%, ranking 2nd place among all R&D teams
- Collaborated with all other teams in R&D department investigating, analyzing, fixing bugs of released product reported by either testers or clients, solved all 5 issues coming to front-haul within 5 working days
- Integrated a new innovated python-programmed log analyzer to system for log checking. Decreased manpower for log checking by 90% and accuracy was over 85%

Hikvision   Hangzhou, CN

Software Developer & Tester   Aug 2019 - Sep 2020

- Developed software for human resource department to conduct recruiting process and manage employee information in a more efficient and effective way, promoting HR working efficiency by 60%
- Implemented 100% covering Unit tests, System Integration test for new software
- Contacted with branch offices to acquire specific needs, worked with business analysis department to align commercial and technical design, and assisted senior architects for high-level architecture design
- Wrote more than 10 official document including software requirement specification, system design document, high-level architecture design document

Amazon China   Beijing, CN

Machine Learning Engineer Intern   Jul 2019 - Aug 2019

- Initiated and trained a clustering analysis model for over 65000 items via Python, K-Means and Mean-Shift
- Built NLP processing model for Chinese using Python, pandas, NumPy, re, Jieba, Mecab, scikit-learn to figure out keywords for goods descriptions, increased 6% of accuracy for automatic categorization
- Utilized analysis results above to decide proportion of manual-categorizing and rules-categorizing (computer conducted) and optimized human resource structure and cut down 30% manpower

Full Stack Security Laboratory at Syracuse University   Syracuse, US

Research Assistant   May 2017 - Dec 2018

- Performed Data-Oblivious External Shuffling on SGX via C, C++, assembly
- Programmed a more secure but highly efficient version of Melbourne shuffle on Intel SGX enclave, measured by overhead less than 30%. The work resulted in a publication: Ju Chen, Yuzhe Tang, Hao Zhou, "Strongly Secure and Efficient Data Shuffle on Hardware Enclaves", SysTex 2017 at ACM SOSP
- Implemented Algorithms with Cache Miss Oblivious Pattern based on previous work by creating a handy and usable library, overhead of using it was less than 15%

TECHNICAL SKILLS

- C++/C(5 yrs.), Python(4 yrs.), x86/ARM Instruction Set(4 yrs.), Linux(5 yrs.), Haskell(4 yrs.), Java(2 yrs.), Ruby(1 yr.) Cpputest, Git, Docker, shell, Event Machine, SQL,Machine Learning, MySQL, Firebase, VSCode