SHIRAN ZHANG

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EDUCATION

Tandon School of Engineering, New York University *Sept. 2021 - May 2023*
Master of Science, Computer Science *New York, United States*
- **Core:** Design and Analysis of Algorithms, Principles of Database Systems, Machine Learning

School of Electronics Engineering and Computer Science, Peking University *Sept. 2017 - July 2021*
Bachelor of Science, Computer Science and Technology *Beijing, China*
- **Cumulative GPA: 84/100.**
- **Core:** Introduction to Computer Systems, Data Structure and Algorithm, Compiling Principles and Practice (96), Theory and Practicum of Computer Network (96), Computer System and Structure, Software Engineering (92)
- **Awards:** May 4th Scholarship of Peking University, Excellent Academic Award, Award for Contribution in Student Organizations, Third Prize in ACM Programming Competition of Peking University

Department of Philosophy and Religious Studies, Peking University (Double Degree) *Sept. 2019 - July 2021*
Bachelor of Philosophy, Philosophy *Beijing, China*
- **Core:** Logic and Argument, Chinese Philosophy, Western Philosophy, Introduction to Religious Studies

INTERNSHIP & RESEARCH EXPERIENCE

Programming Languages Lab, Software Engineering Institute, Peking University *Feb. 2019 - July 2021*
Research Assistant, Advisor: Prof. Yingfei Xiong *Beijing, China*
Interactive Bug Detection and Repair Based on Single Example
- Designed pattern representation in Datalog, which considers patch semantics and supports manual modification
- Developed a graphical user interface tool in Python which is convenient for users to modify the pattern
- Improved the accuracy rate from 2.6% to 78.3%, shortened the time of manual patch correction by nearly 7 times
Automated Patch Porting across Forked Projects
- Collected and analyzed patches between GitHub forks, got the insight that 20.5% of the patches need to be migrated, of which 73.2% can be migrated directly
- Designed an automatic patch porting tool including a patch locator, specification checker and patch modifier

Aurora, ByteDance Inc. *Feb. 2021 - Apr. 2021*
Back End Engineer Intern *Beijing, China*
- Used C++11 and Protobuf to migrate IDs of feed resources in the recommendation system into a unified ID format

Enterprise Mobile Application Studio, Alibaba Cloud Computing Company *July 2020 - Sept. 2020*
Software Development Engineer Intern *Hangzhou, China*
- Removed Maven dependency of Object Storage Service from sample code generation on DevOps Private Cloud
- Integrated monitoring frameworks of Prometheus and SunFire into pipeline construction on DevOps Public Cloud

COURSE PROJECTS

PKU Cat: An Android Application *Feb. 2020 - June 2020*
- Completed three parts of structured requirements analysis, design and coding of core functions, and software testing
- Developed front-end application in Android Studio, using HTTP communication to obtain data from the database
- Used Gantt Chart for project management and GitHub for collaborative development

MiniC Compiler *Oct. 2019 - Dec. 2019*
- Designed a MiniC compiler in C which can run on a Risc-V simulator on Linux
- Leveraged Lex and Yacc to parse MiniC into abstract syntax tree and three-address code in the front-end
- Implemented live variable analysis and linear-scan algorithm during register allocation in the back-end

SKILLS & ACTIVITES

- **Languages:** Mandarin (Native Speaker), English (Proficient)
- **Technical Skills:** C & C++, Java, Python, Linux, Spring & Spring Boot, LaTeX, Git, Vim
- **Hobbies:** Basketall (Member of University Women Team, Leader of Department Women Team), Curling (Member of University Team), Poetry Writing (Leader of May 4th Literature Society)