Nicole Jiao

(778)-318-3770 | ruojin.jiao@mail.utoronto.ca | https://github.com/nicolejiao89

EDUCATION

University of Toronto **2021-09 - 2026-05**

Bachelor of Applied Science and Engineering - Computer Engineering + PEY CGPA 3.70/4.00

- Relevant Courses: Operating Systems, Software Engineering, Algorithms & Data Structures, Computer Organization, Computer Networks, Software Communication & Design, Applied Fundamentals of Deep Learning

SKILLS

- Programming: C++, C, Java, SQL, HTML, Python, RPGLE, ARM Assembly, Verilog, MATLAB,
- Digital Tools: Visual Studio Code, IntelliJ IDEA, Git, Microsoft Office, Postman, Quartus, ModelSim
- Professional skills: critical thinking, self motivated, detail oriented, team player, effective interpersonal communication

PROFESSIONAL EXPERIENCES

Digital China, Java Developer **2024-08 - 2025-08**

- Contributed to the development of the core banking system of Bank of Beijing, focusing on account management and specialized services, delivering solutions at all stages of the development lifecycle.
- Transformed RPGLE programs into a modern distributed system, performing unit testing using Postman to ensure program functionality before collaborating with the verification team to validate all test cases.
- Resolved bugs that caused discrepancies in return codes, messages, and database records in parallel playback.
- Developed and maintained a project management webpage for the entire development team, which utilized a front-end (HTML) and back-end (Java) system, and maintained the database.

Database Developer, GienTech / SQL **2023-07 - 2023-09**

- Collaborated with the GienTech team on the Data Platform Upgrade and Migration Project for the Bank of Hebei
- Developed Excel spreadsheets to configure job schedules, enabling the scheduling platform to automatically process data
- Worked closely with senior programmers to develop and debug SQL programs for data storage procedures

PROJECTS

Project Designer, Google Maps / C++ **2024-01 - 2024-05**

- Implemented a Geographic Information System (GIS) software program using Agile methodologies, integrating modern development tools such as version control (Git), debugging, and unit testing frameworks
- Extended an application programming interface (API) to query data from the OpenStreetMap (OSM) database
- Utilized algorithms (A*, greedy, iterative improvement) and STL data structures (vector, map, set, queue) to optimize code and solve complex pathfinding problems
- Developed a graphical user interface (GUI) to visualize the GIS using the EZGL and GTK graphics library

Project Designer, Catch Me If You Can / C **2023-04**

- Developed a single/dual player game in C for the De1-SoC FPGA, earning a 'Best Project' nomination
- Incorporated extensive input/output functionalities, such as keyboard, VGA, switches, LEDs and HEX displays, which created a highly interactive gaming experience for users
- Implemented lag-free animations of character movements and screen displays utilizing a front and back buffer system
- Developed an efficient algorithm for game mechanics in single player mode which increased game challenge

Project Designer, Processor / Verilog **2023-03**

- Designed and programmed a custom CPU on an FPGA using Verilog, enabling the execution of a wide range of operations
- Implemented key CPU components, including finite state machine, arithmetic logic unit, multiplexer, registers, etc
- Created Verilog modules for interfacing with external devices, such as memory and input/outputs on the De1-SoC board
- Employed ModelSim to simulate and debug the CPU design, ensuring reliable execution of assembly-language programs