Ming Zheng Liu

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Profile & Skills

Motivated and detail-oriented Full-stack Developer with over 4 years of experience in software development and testing. Proven expertise in website and application development, data-driven decision making. Also bringing a unique blend of creativity and aesthetics as a freelance illustrator and website designer.

Programming: Python, PHP, Java, C, R, Database Management (MySQL, PostgreSQL, MongoDB), Web Development (crawler, Restful API, HTML/CSS/REACT), LangChain (LLMs)

Data Analysis: R, SQL, spreadsheet/Advanced Excel(vlookup, pivot table), with Google Data Analytics Certificate

Tools: Git, GitHub Actions (CI/CD), Google Cloud Platform (GCP), Docker, AWS

Languages: Professional Communicating in English and Native Speaker of Mandarin. Can understand French.

Education

University of Toronto, St. George Campus, Honours Bachelor of Science   **Toronto, ON**
Computer Science Major, Bioinformatics and Computational Biology Specialist, Physiology Major   *Sep 2018 - Nov 2023*

Professional Experiences

Self-Employed   **Toronto, ON**
Freelance Designer & Illustrator   *May 2020 – Present*
○ Worked in collaboration with industry professionals on various advertisement, website and marketing projects.

Cox System Biology Lab, University of Toronto   **Toronto, ON**
Pipeline Developer   *May 2023 – Aug 2023*
○ Automated data pipelines in R/RNotebook, enhancing preeclampsia subtype identification research across extensive patient datasets.

Lin System Neuroscience Lab, University of Toronto   **Toronto, ON**
Deep Learning Data Analyst   *Sep 2022 – May 2023*
○ Led a team of 3 to build a virtual reality system for studying fish spatial recognition and navigation in Unity.
○ Developed a python program that automatically extracted key features from videos enhancing the data collection and analysis.

Center for Disease Control and Prevention in Fujian (FJCDC)   **Fuzhou, Fujian**
Emergency Response Support Intern, China   *Sep 2021 – Jan 2022*
○ Worked in a group to respond to local pandemic outbreak. Developed an efficient excel database to record epidemiological data.

Project Experiences

Table Occupancy Visualization Web Application
React, TypeScript, UI/UX Design,   *Aug 2024 – Sep 2024*
○ Developed an intuitive restaurant table occupancy tool with dynamic layout customization.
○ Enabled users to add tables, group them by rooms, and track total capacity in real-time.
○ Provided real-time waiting time calculations for new guests, optimizing seating management.

Art Gallery Website Full Stack Development
Python, MongoDB, Restful API, REACT and LangChain   *Apr 2024 – Jul 2024*
○ Built a personal website for all artist creations and illustrations for an online exhibition using REACT.
○ Incorporated LangChain and GPT4 for automatically crawling data from artist social media to dynamically update the latest art.
○ Implemented MongoDB for robust back-end data management, allowing for efficient storage and retrieval of artwork information.
○ Designed and developed RESTful APIs using Python to facilitate seamless data interchange between the front-end and database.

Friend Chatting Server Application
C and Unit Testing   *Jan 2023 – May 2023*
○ Used machine-oriented programming and BASH shell programming to develop a chatting software in Linux OS server.
○ Utilized GDB debugger for effective troubleshooting and code optimization, resulting 100% test cases passing rate.

Restaurants Review Application
Java and MySQL   *Sep 2020 – Dec 2020*
○ Led a small team to develop a restaurant rating and reviewing software using Java with Clean Architecture in designing code.
○ Utilized MySQL for database management, ensuring efficient data storage, retrieval, and manipulation.
○ Developed and maintained automated testing frameworks, reducing manual testing efforts by 40%.
○ Performed regression testing for each software release, analyzing results to identify critical areas for improvement.

Volunteering

VHA Health Care   **Toronto, ON**
Administrative Support Volunteer, Canada   *Apr 2024 – Present*
○ Interacted with patients in a professional and caring manner, supporting the organization and administration of a clinic.