Zhengnan (Timmy) Zhu

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EDUCATION

University of Toronto   Toronto, ON
*Master of Engineer in Electrical and Computer Engineering; **GPA: 4.0/4.0***   *Expected Graduation: Aug 2024*
Emphasis in Data Analytics and Machine Learning

University of Waterloo   Waterloo, ON
*Bachelor of Computer Science and Financial Management (Honours Co-op); **GPA: 3.7/4.0***   *Sep 2018 - Apr 2023*

EXPERIENCE

Xiaomi Technology   Beijing, China
Software Developer   *Jan 2022 - Aug 2022*

- **Backend Development:** Developed a software application similar to Samsung MagicTune for Xiaomi monitors using **C++**, enabling users to adjust display settings such as brightness and contrast directly from the computers.
- **Frontend Development:** Utilized **Node.js** and **Electron framework** to create a user-friendly interface and ensure seamless communication with monitor hardware.
- **Embedded Systems Development:** Programmed the monitor's firmware to convey customized DDC/CI commands using **Embedded C**, enhancing the software's ability to communicate with and control the hardware.

Electro Source   Toronto, ON
Software Developer   *Sep 2020 - Dec 2020*

- **Workflow Automation:** Developed Tax Incentive Workflow using **Python** that automated the process of updating users' work records in Polarion and Jira systems.
- **Slack Bot Architecture:** Integrated the workflow with Slack and built the Slack chatbot, enabling users to update their work records directly through a chatbot interface.
- **Email Processing:** Implemented an automated email processor for form submission, allowing users to update their records through email

ATS Automation Tooling Systems   Cambridge, ON
Software Developer   *Jan 2020 - Apr 2020*

- **Project Tracking Features:** Developed **MS Excel VBA** tools to assist team leaders in managing project statuses, allowing real-time upload of work records to a centralized database for managers to monitor progress across various projects.
- **Data Processing:** Crafted an M query file for Power Query, enhancing data extraction and analysis processes.

DigitalEd   Waterloo, ON
Quality Assurance Analyst   *May 2019 - Aug 2019*

- **Test Case Development:** Formulated unit test cases for Mobius features, applying Gherkin and Jest syntax for accuracy.
- **Bash Scripting:** Implemented functions to validate user inputs, employing Test-Driven Development practices.

PROJECTS

Chess Game | *GitHub*

- **Game Development:** Constructed a two-player chess game in C++, incorporating OOP principles like inheritance and observer pattern.

Simplified Network Flow | *GitHub*

- **Network Stack Implementation:** Developed critical network stack components in C++, focusing on Ethernet and IP packet transmission.

Data Analytics and Machine Learning Projects | *GitHub*

- **Machine Learning Application:** Applied KNN, Decision Trees, and Neural Networks in Python for comprehensive data analysis.

Face Recognition and Age Estimation | *GitHub*

- **Neural Network Architecture:** Developed and compared CNN, ResNet, DenseNet, Xception and Squeezenet models for face recognition and age estimation, incorporating data augmentation and cleaning for preprocessing.

SKILLS

Programming Languages: C/C++, Python, Java, Bash, R Studio, VBA, DrRacket, Kotlin, JavaScript, HTML/CSS

Technologies: Flask, Node.js, MySQL, Git, Docker, AWS, Kubernetes, GCP, PyTorch, TensorFlow, Bitbucket, Jira, LaTeX, Polarion, PowerBI