Zhiyu Pan

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Skills

Programming Languages: Python, C, Java, Bash, Assembly, MATLAB, HTML5, CSS, SQL, Swift

Tools: Git, Visual Studio, Eclipse, Android Studio, Xcode, JIRA, Microsoft Office, Linux OS, AWS

Tech Skills: Object-Oriented Programming, Algorithm and Data Structures, Pandas, NumPy, Matplotlib, Scikit-Learn

Languages: Chinese (Native), English (Professional), French (Elementary)

Soft skills: creativity, collaboration, adaptability, leadership, conflict resolution and negotiation

Education

University of Toronto, Scarborough Toronto, ONs

BSc Specialist (Co-operative) Program in Computer Science; ***GPA: 3.65/4.00*** *Sep 2021 – May 2025 (Expected)*

Relevant coursework: Linear Algebra, Discrete Mathematics, Introduction to Probability, Software Design, Introduction to Machine Learning and Data Mining, Introduction to Numerical Algorithms for Computational Mathematics

Experience

University of Toronto Toronto, ON

Teaching Assistant *Sep 2022 – Dec 2022*

- Conducted weekly office hours and organized review sessions for Calculus for Management course.
- Created and facilitated practice problems during review sessions to improve students' integration and differentiation techniques, resulting in positive feedback from students and course professors.
- Provided individualized help to students by breaking down complex concepts into more manageable parts.

Projects

Course Planning Application

- Employed the Model-View-Controller (MVC) design pattern to ensure a clear separation of concerns and facilitate smooth user interactions.
- Developed a dynamic course timeline module utilizing the Factory Method pattern, optimizing course placement by considering prerequisites and session availability.
- Build using Java for back-end logic, Android Studio for front-end design, and Firebase for data management, tested the application using Mockito framework
- Enabled students to explore, select, and integrate courses into their personalized schedules. Equipped instructors with user-friendly capabilities to add and modify course offerings.

System Monitoring Tool

- Developed a C program tailored for Linux environments, proficiently gauging diverse system utilization metrics encompassing CPU and memory usage, fundamental system architecture, and user details.
- Used command line arguments to support different information reporting formats, adapting to user requirements.
- Enhanced efficiency through the implementation of concurrency, employing multiprocesses.

News Article Categorization Model

- Engineered a Python-based machine learning solution utilizing Gaussian Class Conditionals, k-Nearest Neighbors, and Naive Bayes classifiers.
- Mitigated overfitting through comprehensive cross-validation during training on preprocessed data.
- Leveraged the Numpy pandas library for efficient implementation.

System-Wide FD-Tables Tool

- A C program displaying the tables used by the OS to keep track of open files, assignation of FD and processes.
- Able to generate report and output data to file as user requests.