Daniel Zhang

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TECHNICAL SKILLS

Languages: Java, Python, Kotlin, C/C++, C#, HTML/CSS, JavaScript, React.js, Node.js, Express.js, Tailwind CSS
Databases/Cloud: SQL, Oracle, MongoDB, Microsoft 365 Developer Environment, Netlify, Postman, Swagger
Developer Tools: Git/GitHub, Azure DevOps, OpenCV, VS Code, Visual Studio 2022, Android Studio, Office 365

EXPERIENCE

Toronto Transit Commission   Jan. 2024 – Apr. 2024
Programmer Analyst   *Toronto, ON*

- Successfully utilized Microsoft Entra **cloud computing services** to engineer real-time OneDrive sync notifications using React.js and Node.js, actively deployed commission-wide to **6,000+** employees
- Leveraged cutting-edge **generative AI** to code and train a **Teams chatbot** with Microsoft Copilot Studio via deep-learning algorithms and natural language processing, increasing employee engagement by **70%**
- Developed a brand-new database management application for **20+** developers using C#, .NET Framework, SQL, and Oracle, overhauling the previous system's efficiency by **90%**
- Implemented SharePoint Framework (SPFx) to integrate **custom web parts**, improving collaboration extensions and functionalities in SharePoint sites to facilitate **streamlined workflows** and boost productivity

Ontario Ministry of the Attorney General   May 2023 – Aug. 2023
System Support Officer   *Toronto, ON*

- Demonstrated expertise in troubleshooting, testing, and solving various **software and hardware** issues
- Facilitated the successful deployment and implementation of new software systems through Microsoft Azure databases and Radia client for **400+** ministry employees
- Maintained accurate and **comprehensive documentation** of tickets and user support guides

PROJECTS

SignWave ⧉ | *Python, OpenCV, MediaPipe, Scikit Learn*

- Developed an AI-powered **American Sign Language** (ASL) translator, using **OpenCV** computer vision and advanced landmark detection algorithms for real-time ASL gesture recognition
- Implemented Google's **MediaPipe** open-source ML model to design a sophisticated machine-learning pipeline to process extensive ASL hand data, achieving **98.7%** accuracy through iterative model refinement
- Constructed end-to-end solutions for efficient data collection to process **3000+** datasets of ASL training images, ensuring comprehensive coverage and optimizing software performance

Connexus ⧉ | *React.js, Node.js, Express.js, MongoDB, Postman*

- Engineered a real-time messaging platform using the **MERN stack** (MongoDB, Express.js, React.js, Node.js), with seamless user experience and robust backend functionality supporting one-on-one and group chats
- Designed and integrated user authentication and authorization systems using **WebSocket** technologies and **JSON web tokens** for secure access control, maintaining user privacy and data integrity
- Optimized scalable backend architecture utilizing Postman for **REST APIs**, MongoDB for database management, and Express.js for handling HTTP requests, ensuring high performance and reliability under high traffic loads

Itemize ⧉ | *Java, Kotlin, Android Studio, SQLite, Gradle*

- Created an advanced to-do list **mobile application** using Android Studio incorporating extensive features
- Utilized **SQLite** database integration to manage and store task data efficiently, ensuring smooth synchronization
- Designed and optimized UI elements for intuitive **task management**, focusing on usability and accessibility to enhance the overall user experience, compatible with all devices supporting **Android 5.0+**

EDUCATION

University of Waterloo   Waterloo, ON
Bachelor of Computer Science   *Sept. 2022 – Apr. 2027*

- Relevant courses: Designing Functional Programs, Algorithm Design and Data Abstraction, Object-Oriented Software Development, Logic and Computation, Data Structures, Statistics, Probability