Gurkirat Bindra

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Education

York University   **September 2021 – April 2025**
Bachelors of Engineering., Spec. Hons. - Software Engineering   *Toronto, ON*

Relevant Coursework

- Data Structures
- Computer Organization
- Machine Learning
- Embedded Systems
- Software Development
- Operating Systems
- Systems Programming
- Computer Architecture

Technical Skills

Languages: Python, Java, C, C#, C++, HTML, CSS, JavaScript, SQL, PowerShell, PHP, Swift, R, MATLAB
Developer Tools: VS Code, Eclipse, Google Cloud Platform, Android Studio, Azure, Git, Google Cloud Platform (GCP)
Technologies/Frameworks: PowerApps, C#.NET, GitHub, REST, AWS, SharePoint, JSON, Terraform, MS Office Suite

Experience

TNR Developers - Freelance   **February 2022 – Dec 2023**
Full Stack Developer Intern   *Brampton, ON*

- Enhanced **SharePoint** with **C# .NET**, yielding a **20 percent boost in operational efficiency** for client projects.
- Played a key role in an **Agile SAFe** scrum team, applying expertise in **Git** and **project management** to enhance software development and task flow efficiency using **Java** and **Swift**.
- Applied **DevOps** for project efficiency, leveraging **Go** for automation/integration to enhance workflow management.
- Engineered client network solutions with focus on **IP protocols** (**NETCONF, GRPC, gNMI**) and **infrastructures (LAN, WAN, WLAN, and Firewall configurations)** for enhanced security and connectivity.

Projects

Portfolio Website | *HTML, CSS, JavaScript, VS Code*   **January 2024**

- Developed a responsive personal website with **JavaScript**, **HTML** and **CSS** using **Microsoft Visual Studio**.
- Boosted **SEO** and utilized **AWS** hosting, leading to a **15 percent uptick in web traffic** and improved performance.
- Integrated a content management system using **GCP** and **SharePoint** for easy updates and maintenance.
- Deployed website on a cloud platform, **GitHub**, ensuring high availability and scalability.
- Enabled dynamic content and data retrieval by integrating **RESTful APIs** with **Node.js** and **React.js**.

Flexx - Java Desktop App | *Java, Git, Eclipse, MySQL*   **April 2023**

- Developed a fitness planner app with advanced algorithms, utilizing **JavaFX** and **MySQL** databases, enabling users to create personalized workout plans.
- Integrated **3D graphics** using **OpenGL** and a **GUI** for real-time visualization of workout routines while integrating **Python scripts** for data processing, **improving efficiency by 30 percent.**
- Implemented infrastructure with **Terraform**, parallel to **Kubernetes** and **Helm**, for resource orchestration on **GCP**.
- Incorporated **machine learning** algorithms for dynamic workout personalization, resulting in a **25 percent increase in user engagement** by adapting to individual fitness goals and progress.

Microwave Oven Embedded System | *C, MCUXpresso, FRDM KL-43Z*   **March 2023**

- Engineered an embedded microwave oven controller leveraging the **FRDM KL-43Z** board, programmed in **C** with **MCUxpresso SDK** for hardware interfacing, **GPIO manipulation**, and **UART communication**.
- Employed **fsl_gpio.h** for digital input/output configuration on **GPIO pins**, facilitating **relay activation**.
- Developed **LCD display interface** for status updates using **low-level C** library functions for control operations.
- Implemented **C-based debouncing algorithms** to stabilize button input for microwave operation control.
- Implemented **UART initialization** with a precise **Baud Rate** of 115200 for enhanced data transmission efficiency.

Automatic Plant Watering System | *MATLAB, Arduino*   **October 2022**

- Engineered an Automated Plant Watering System using **MATLAB** and **Arduino** integrated with a moisture sensor and a water pump, demonstrating practical application of **IoT** principles.
- Integrated **AI algorithms**, including **decision trees** and **neural networks**, for predictive watering.
- Utilized sensor data processing for real-time adjustments, showcasing practical application of **AI** in responsive systems.

Leadership / Extracurricular

Visions Electronics   **September 2017 – July 2021**
Customer Service Representative   *North York, ON*

- Proficiently utilized **Windows** and **Linux OS** to enhance **customer service** efficiency and process optimization.
- Optimized customer service and process management using **Windows OS**, with enhanced reporting via **Windows 10**.
- Prioritized financial accuracy and **professionalism** in customer account adjustments using **MS Office Suite.**