Harmanjot Malhi

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EDUCATION

Honours Bachelor of Science, Computer Science (Software Engineering Concentration) Dec 2021 – Present
Brock University, St. Catharines, ON

- Expected Graduation: December 2025
- Coursework: Computer Networks, Advance Data Structures, Computer Systems, Algorithms
- GPA: 3.7/4.0
- Scholarships & Awards: Brock Entrance Scholars Award, Dean's Honour List Year 1, 2, 3

TECHNICAL SKILLS

Languages: Java, C++, Python, Assembly, HTML/CSS, JavaScript
Frameworks & Databases: React, Express, Socket.io, JUnit, RESTful, PostgreSQL, MySQL, Firebase
Technologies: NodeJS, Docker, Git/GitHub, Bash, Java Servlets, JDBC, Excel, Jira, SDLC, WordPress

EXPERIENCE

Research Assistant January 2024 – December 2024
Brock University

- Led the development of a state-of-the-art 6G testbed where the team evaluated future wireless technologies and supported research on ultra-low latency and ultra-high data transfer.
- Researched about concepts such as virtualization, Linux and tools like Docker, Kubernetes, to develop an understanding about the architecture of a testbed. Then deployed the testbed locally on a ubuntu VM and conducted observability management.
- Implemented a comprehensive observability solution for Kubernetes-based 5G/6G infrastructure using Prometheus, Grafana, ELK Stack, and Jaeger, enabling real-time performance monitoring, issue detection, and network optimization.
- Streamlined the testbed operations by automating the collection of data and the reporting of processes which helped reduced the testing life cycle by 15%, enabling a faster performance evaluation.

PROJECTS

Event Management App April 2024
[React, Node.js, Express.js, Firebase]

- Served as the Scrum Master and Backend Developer, facilitating agile ceremonies and improving sprint efficiency by 40% and reducing project delivery time 20%. Successfully contributed to development efforts and improved team productivity.
- Designed and developed a scalable platform using React, CSS for the frontend and Node.js, Express.js, and Firebase for backend. Integrated real time ticketing availability, secure payment processing, and authentication, reducing checkout failure by 10%.
- Implemented data analytics dashboards as a pro feature to provide insights to organizer on ticket sales, and event performance. Developed API access for pro users allowing seamless integration with third-party tools and automation workflows.

Traffic Simulator OOPS December 2024
[Java, MVC, UDP, Object-Orient Programming]

- Architected UML diagrams for a complex game, leveraging advanced object-oriented programming principles to create an efficient and comprehensive system architecture
- Developed game logic, rules, and user interaction mechanisms by integrating advanced Java features such as wildcards, generics, lambda expressions, I/O, and utility classes, resulting in a top-tier implementation within the class.
- Revamped project to utilize a multi-threaded client-server model with UDP protocol for packet sharing, supporting multiple players, resulting in a 40% reduction in latency and smoother game performance.

Android Application Project April 2023
[Android, Java, Retrofit, Networking]

- Developed "Recipica," an Android application integrated with the Spoonacular API that fetches and displays over 500+ curated recipes complete with detailed instructions, ingredient lists, and similar recipe suggestions.
- Engineered dynamic UI components, including Recycler View with custom adapters, SearchView, and Spinner—that smoothly render 100+ recipe items per session and reduced data and image load times by approximately 30% using the Picasso library.
- Leveraged third party libraries like Picasso for efficient image loading and caching, and developed 7 custom adapters (e.g., for recipe listing and detailed ingredient views) to create modular and maintainable UI components.