

Jaskaran Singh Malhotra

jaskaran20020@gmail.com | (647) 675-9473 | Hamilton, ON | [GitHub](#)

SUMMARY

Backend and full-stack developer with hands-on experience building production web and Android applications across healthcare, AI, and enterprise contexts. Proficient in Java, C#.NET, Python, and PostgreSQL. Comfortable working across the stack — from REST API design and database modelling to frontend integration. Co-op experience at Mohawk College involved real clinic deployments; research experience included delivering a working facial recognition system for an external client (Canadian Air Force Museum).

TECHNICAL SKILLS

Languages: Java, C#, Python, JavaScript, SQL, PHP, C, C++, HTML/CSS

Frameworks & Libraries: .NET Core, React.js, Node.js, Express.js, Angular, Laravel, React Native, PyTorch

Databases: PostgreSQL, MySQL, SQL Server, Redis, MongoDB

Cloud & DevOps: Microsoft Azure, AWS (EC2, S3), GCP, Azure Key Vault, Docker basics

Tools: Git, JIRA, Postman, Swagger UI, Pytest, Selenium, GitHub Actions

Other: REST API design, JWT auth, SignalR, Hangfire, Entity Framework Core, OpenCV, CUDA

WORK EXPERIENCE

Programmer Analyst | *Mohawk College – Clinic Applications Team* May 2023 – Dec 2023

- Built and shipped a full-stack web application for DiagnaMed clinic — a brain health platform enabling physicians to manage patients with early-onset Alzheimer's and memory disorders.
- Owned frontend development and backend integration using React, .NET C#, and PostgreSQL; collaborated in a 2-person team using Agile/JIRA workflows.
- Redesigned UI components specifically for elderly users — improved visual hierarchy, contrast ratios, and interaction targets to address cognitive and vision impairments.
- Implemented secure authentication and role-based authorization for patient and physician data, adhering to HIPAA-aligned standards.
- Wrote unit tests and conducted API validation using Postman; resolved bugs across frontend and backend layers.

Machine Operator | *Canada Bread (Bimbo Canada)* Jan 2022 – Present

- Operate automated production line equipment; trained new operators and maintained safety compliance under fast-paced conditions.

PROJECTS

WWII Veteran Identification System — Canadian Air Force Museum | *Python · InceptionResNet · ArcFace · Real-ESRGAN · OpenCV · CUDA*

- Selected as one of four students to build a production-grade AI system for identifying WWII veterans in archival photos for the Canadian Air Force Museum.
- Implemented Real-ESRGAN for image restoration and super-resolution on a dataset of 1,000+ degraded historical photographs, significantly improving input quality for downstream recognition.
- Trained and validated facial recognition models (InceptionResNet, ArcFace) with automated image slicing and enhancement pipelines to handle large high-resolution inputs within GPU memory constraints.
- Resolved CUDA acceleration issues, OpenCV compatibility errors, and deep learning model integration bugs; system successfully identified individuals across the archive.

Medic Helper — Android Medication Tracker | *Java · .NET Core · PostgreSQL · Azure · JWT · Firebase FCM*

- Built a full-stack Android application from scratch in Java, with a .NET Core backend, enabling users to track medications, set reminders, and manage appointments for themselves or dependent family members.
- Implemented secure authentication using JWT and Microsoft Identity; designed relational PostgreSQL schema with role-based family access model.
- Integrated Firebase Cloud Messaging for real-time push notifications; deployed backend on Azure with credentials managed via Azure Key Vault.
- Wrote automated test suites using Postman/Newman and Pytest to validate REST API behaviour under load.

DiagnaMed Brain Health Platform | *React · .NET C# · PostgreSQL · REST APIs*

- Co-developed a clinical web platform for early detection of Alzheimer's and memory disorders, serving physicians and patients at a real clinic.
- Led frontend development and API integration; improved accessibility for elderly users through redesigned UI with better contrast, larger interaction targets, and simplified navigation.

EDUCATION

Advanced Diploma — Computer Systems Technology, Software Development | *Mohawk College, Hamilton ON* 2021 – 2024

- Dean's Honours List — awarded 4 times for academic excellence.
- Applied Researcher on AI facial recognition project for the Canadian Air Force Museum; one of four students selected college-wide.
- Vice-President, The New Developers Software Club — co-led a team of 7, grew club membership to 160+ participants across hackathons and workshops.
- Co-Founder & President, Mohawk Re-Defined Club — founded a career development and mentorship club supporting students from marginalized communities; chapter of a larger non-profit organization.