# Daksh Malhotra

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## Skills

**Languages:** Java, Python, JavaScript, TypeScript, SQL, MATLAB, Bash
**Frameworks:** React, Next.js, React Native, Flutter, FastAPI, Flask, Tailwind
**Tools:** Git, Docker, Linux, MongoDB, PostgreSQL, MySQL, Databricks, Apache Spark, LaTeX
**Libraries:** PyTorch, TensorFlow, NumPy, Pandas, Scikit-learn, OpenCV, YOLO, OpenAI API

## Experience

**Machine Learning Intern** — Jan 2026 – Present
*Monash AI Institute, Melbourne*

- Architecting a scalable early-warning system to identify at-risk students using large institutional datasets within Azure Databricks on the Monash Data Lakehouse.
- Performed large-scale exploratory data analysis and feature preparation using SQL and PySpark across behavioural and academic datasets.
- Engineered predictive features from LMS interactions, assessments, and engagement metrics.
- Developed and optimised ensemble models (XGBoost) which improved risk prediction performance.

**Software Lead & Co-Founder** — Jan 2025 – Present
*Stampd, Melbourne*

- Designed and implemented backend architecture integrating REST APIs, databases, and frontend services.
- Led system architecture decisions focused on scalability, maintainability, and production readiness.
- Managed engineering workflows including sprint planning, code reviews, and feature delivery.

**Machine Learning Engineer** — Aug 2025 – Present
*Monash Deep Neuron, Melbourne*

- Developing a surgical simulation environment for reinforcement learning experimentation.
- Designed state, action, and reward formulations to support realistic RL environments.
- Coordinated experimentation pipelines and model validation across multidisciplinary teams.

## Projects

**ClubHub – Co-Founder & Full Stack Engineer** — Jan 2026 – Present

- Building scalable mobile application using React Native, Flask, and Supabase.
- Implemented authentication, backend APIs, and recommendation logic supporting real-time campus event discovery.

**Finding Nibbles – Backend & AI Lead** — Feb 2025 – Nov 2025

- Built personalised recommendation pipelines using Gemini API with location-aware filtering.
- Developed backend services using Meteor.js and MongoDB with Google Maps API integration.

**Way Finder – ML Researcher** — Jan 2025 – Aug 2025

- Implemented Kalman filters to stabilise indoor navigation using real-time IMU sensor data.
- Developed machine learning models to reduce drift and improve heading accuracy.

## Education

**Bachelor of Engineering (Honours) – Software Engineering** — Jul 2023 – Jun 2027
Monash University — GPA: 3.5