

POOJA PATEL

0210394058 | ppat965@aucklanduni.ac.nz | [linkedin.com/in/965-ppatel](https://www.linkedin.com/in/965-ppatel) | github.com/ppat965

PERSONAL STATEMENT

Master of Engineering graduate in Computer Systems, with a focus on software and data analysis, and an interdisciplinary foundation in Biomedical Science. I bring a practical, adaptable approach to technical problems, backed by experience across engineering, operational and customer-facing roles.

EDUCATION

Master of Engineering – Computer Systems University of Auckland	JUL 2023 – JUL 2024
Bachelor of Engineering (Hon) – Computer Systems University of Auckland	FEB 2019 – NOV 2022
Bachelor of Science – Biomedical Science University of Auckland	FEB 2015 – JUL 2018

TECHNICAL SKILLS

- Programming Languages: Python, Java, C++, embedded C, HTML, CSS, JavaScript, R, MATLAB and VHDL.
- Frameworks/Libraries: SpringBoot, Pandas, Scikit-learn, React, TensorFlow and PyTorch.
- Tools: Git, GitHub, Docker, REST APIs and Visual Studio Code.
- Cloud & DevOps: Amazon Web Services.

PROJECTS

Towards reliable asthma attack prediction using Machine Learning – Master's Project

- Engineered a custom **Python pipeline** using **Pandas** and **Scikit-learn** to automate **data preprocessing**, imbalanced dataset handling (e.g. **SMOTE/resampling**), and **hyperparameter tuning** across multiple **Machine Learning** classifiers and **TensorFlow neural network** models.
- Conducted **feature extraction** and **correlation analysis** on clinical smart device data to identify biomarkers predating asthma attacks.

Pooja's Perspective – Web Portfolio

- Developed a static website deployed on **GitHub pages** using **Jekyll**, **HTML**, and **CSS**.
- Designed and implemented a custom theme with **adaptive** screen layout and am managing **version control** with **GitHub** (Link: ppat965.github.io).

Wireless Tracking System for Seabirds – Part 4 Project

- Built a **Python** simulation of **LoRa**-based bird tracking using **Two-Ray** and **Plane Earth** propagation models for **RSSI**-based **trilateration**.
- Modelled real-world conditions by incorporating **thermal noise** and **Monte Carlo** simulations.
- Proposed a 12 base station architecture across the 4,000km² Hauraki Gulf, achieving a mean **localisation** error of 101m and produced full **hardware** specifications for a physical tracker.

Systems Project 2022 – Systems Week

- Led a 32-person team developing a **systems thinking** business case on adapting NZ infrastructure in response to climate change.
- Managed **workflow** using **Trello** and facilitated **decision-making** across subgroups, resulting in a peer-review score of 9.5/10.

EXPERIENCE

Duty Manager – Foxton Food Market

DEC 2018 – PRESENT

- Manage a team of five across stock organisation, staff training and regulatory compliance, maintain a valid Duty Manager Certificate for the Horowhenua region.
- Identified an operational bottleneck in stock price updates and implemented a remote price change system, reducing the time spent on price updates by 50%.

Graduate Teaching Assistant – University of Auckland

JUL 2023 – NOV 2023

- Supported lab sessions where students used Boolean logic to program a robotic car.
- Proactively identified struggling students and provided targeted assistance and mentorship, achieving 100% lab completion rate.

Census Collector – Stats NZ

FEB 2023 – MAY 2023

- Engaged the diverse community across the region to promote census participation.
- Assisted throughout the completion process, contributing to a 91% response rate in the region.

Digital Solutions Intern – Department of Corrections NZ

NOV 2022 – FEB 2023

- Presented a review of accessibility and inclusivity across technology at the company.
- Created a protocol for developers to assess accessibility in applications based on WCAG and NZ Web Standard guidelines using existing software.
- Audited internal application user guides, created a standardised template and rewrote 25% of documentation to meet the new format, improving consistency across the product suite.

Teaching Assistant – University of Auckland

JUL 2022 – NOV 2022

- Supervised over 60 students weekly on PSoC-based pathfinding robot project, debugging C/C++ algorithm code and fostering a positive learning environment.

ACHIEVEMENTS

- AWS Certified Cloud Practitioner – Amazon Web Services (2026)
- Best Part 4 Project – Telecommunication and Environmental Systems Category (2022)
- License Controller Qualification (2016)
- Runner-Up Dux of Manawatu College (2014)
- The successful applicant of The Rotary National Science and Technology Forum (2014)

VOLUNTEERING AND INTERESTS

- Volunteer – Pink Ribbon Appeal (2023, 2025), University Open Day (2023), Good B***** Baking (2025-)
- Subscriber – Service 95 Book club (2024-)
- Participant – Kiwi Jam (2022, Unity and C# game design)
- Class Representative for Physics 121 in Semester One, 2019

REFERENCES

REFEREES AVAILABLE ON REQUEST