Ileana Pal

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EDUCATION

Stanford University, USA — *MS Aeronautics and Astronautics Engineering, Year 1*
September 2025 - June 2027

The Hong Kong Polytechnic University, Hong Kong — *BEng (Hons) in Mechanical Engineering*

September 2021- June 2025

- CGPA: 4.01 WGPA: 4.12
- Perceptual Robotics (A+); Heat and Mass Transfer (A+); Linear Systems and Control (A+); Numerical Methods (A+); Object Oriented Programming (A)

EXPERIENCE

Mechanical Engineering Summer Intern, CLP Holdings
July 2024 - August 2024
- Contributed to three key projects in the Development and Asset Management team. Understood and applied the engineering principles needed for asset management of industrial power plants and renewable energy plants, including Energy Yield Assessment of Wind Farms using wind flow analysis.

Undergraduate Research and Innovation Scheme, Hong Kong
September 2023 - September 2024
- Specializing in localizing UAVs indoors, using IMU Dead Reckoning and accumulated error correction using machine learning aided by stationary updates. Conducted live sensor fusion for navigation using the Extended Kalman Filter.

SureFire Research, Hong Kong — *Researcher*

March 2023 - August 2023

- Developing an AI reconnaissance system using UAVs to aid in fighting large-scale fires in indoor environments. Modified the UAVs mechanical systems to implement robotic elements like servo arms for sensor deployment, prototyping various designs for different use-cases of each UAV.

EXTRA-CURRICULAR ACTIVITIES AND PROJECTS

Building a liquid-fuel autonomous landing rocket for payload delivery, HK PolyU — Final Year Capstone Project
September 2024 - April 2025
- Applied engineering principles to build a rocket that lands autonomously.
- Build prototypes, conduct tests and optimize features to attain the desired functions.

Google Developer's Student Club, HK PolyU— Vice President
September 2023 - June 2024

PolyU Team Leader @ 2023-24 Hong Kong Academy of Engineering Sciences Competition on Grand Challenge Engineering Topics
November 2023 - April 2024
- Lead a team of 6 individuals to ideate and develop EcoFlight, an AI empowered software to optimize airplane taxi routes and increase efficiency at major airports across the world, thereby reducing CO_2 emissions in aviation.
- Won the competition against representative teams of top 5 HK universities.

Engineering Summer Programme, The University of Cambridge
July 2023 - December 2023
- Attended a rigorous engineering training with minimum 45 hrs of contact time over 4 weeks.
- Learnt about: The Jet Engine, Nanotechnology and Quantum Technologies.

International Student Association, HK PolyU— *President*
May 2020 - December 2021

Student Development and Affairs Committee, HK PolyU— *Student Representative*
November 2022 - October 2023

SKILLS

C++; Java; Arduino; SQL; MATLAB; SolidWorks; Fusion 360; 3D Printing; AutoCAD; Ubuntu Linux; Git; Circuit Analysis; Linear systems and Numerical Methods; Manufacturing Processes

AWARDS

Outstanding Student Award - Mechanical Engineering
Awarded annually to one final-year student in the department

CLP Scholarship 2024
Received a scholarship of HK$20000 for demonstration of strong engineering capabilities

2023-24 HKAES Competition on Grand Challenge Engineering Topics Winner -
Won against representative teams of 6 Hong Kong Universities (HK$50000)

The IET Prize 2023 -
Awarded to one student from PolyU for demonstration of excellent engineering skills

The Presidential Student Leadership Award of Department -
Awarded to one student from the Mechanical Engineering department for exemplary academic and non-academic performance

Full Entry Scholarship - Academic
Awarded 140% Scholarship at The Hong Kong Polytechnic University

LANGUAGES

English – First Language
Hindi – Fluent
Bengali – Fluent
French – Delf B1; received 7 in French-B SL in the IBDP course