# Yash Mali

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## About

 I am an undergraduate student at the University of British Columbia (UBC) interested in Machine Learning / Artificial Intelligence and Optimization. I have worked as a Undergraduate Researcher applying AI to many fields and as a ML engineer. I am driven by fundamental questions about what deep learning learns and how optimization shapes intelligent behavior in AI systems.

## Awards

### Advanced Machine Learning Network: AML-TN

*April 2025*

*"AML-TN sponsored internships highlight the value of developing young researchers as the next generation of machine learning specialists."*

### 2X Undergraduate Research Award: WLIURA

*May 2024, 2025*

*"These awards subsidize professors to hire international undergraduate students to work full-time on their research projects in the Summer Session (May to August)."*

## Experience

- **Healthcare AI – Undergraduate Research**  | **UBC Medicine** (co-op) | *May 2025 – Sep 2025 (Continuing part-time)*

  Bringing safe and interpretable AI into medicine. We build software that ingests medical guidelines and delivers evidence-based recommendations through natural language interfaces, with privacy preserved. Our work combines computer science, medical, and clini-

cal research in collaboration with UBC's Cloud Innovation Centre. Current projects include agentic NLP pipelines with UIs hosted on AWS chatbots for Bipolar Disorder and Depression. Supervised by Dr. John Jose Nunez.

- **ML Engineer – Undergraduate Research** □ | **UBC SCARP & ECE** (part-time) | *May 2025 – Present*

  Using latest developments in NLP and Computer Vision to analyze public records from Vancouver's housing development approval process. This work bridges AI and social science to address Canada's housing crisis. Supervised by Dr. Julia Harten and Dr. Christos Thrampoulidis.

- **Unpacking AI** □ | **UBC Arts** (part-time) | *May 2025 – Present*

  Developing modules in existing faculty of arts courses that highlight how AI can be used in their field. For example, sequence modelling in economics or computer vision in archeology. Funded by UBC's Teaching and Learning Enhancement fund (TELF). Supervised by Dr. Laura Nelson and Dr. Jonathan Graves. More info.

- **AI and Automation Developer** □ | **Lux Bio** (co-op) | *Sep 2024 – May 2025*

  Applied AI-based drug discovery tools like AlphaFold and ProteinMPNN to optimize sequences and 3D structures of enzymes. Revamped automation systems for bioprocess engineering, orchestrating sensors, pumps, motors, and valves.

- **Computer Vision & Automation – Undergraduate Research** □ | **UBC Engineering @ Frostad Research Group** (co-op) | *May 2024 – Sep 2024*

  Developed particle tracking software using an ensemble of open-source computer vision models along with a UI to correct mistakes. Automated and developed data collection software for new instruments invented by the research group. Helped with some day-to-day lab activities. Supervised by Dr. John Frostad.

**Additional Experience**

- **UBC AI Club** □ | *Jan 2025 – Present*

  President: Leading initiatives to encourage student understanding and future pathways in AI and ML.

- **UBC Uncrewed Aircraft Systems** □ | *Sep 2024 – Present*

  Leading the ML sub-team to explore and tune open-sourced models for object detection and tracking. This is a small piece of the puzzle on our drones that compete in two university-level autonomous drone competitions every year.

- **UBC Biological Internet of Things** □ | *May 2025 – Present*

  Automating brewing/fermentation equipment with IoT-controlled devices while also trying to make glow-in-the-dark beer using green fluorescent protein (GFP).

- **IT Helpdesk Support** □ | *May 2023 – May 2024*

  Provided technical assistance to faculty, staff, and students for tech-related queries and equipment across campus.