Anant Khanna

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Professional Summary

I'm a UBC engineering student pursuing computer engineering with expertise in machine learning, software development, and embedded systems. I have hands-on experience deploying and optimizing machine learning models and designing IoT systems. I have professional work experience from my internship at Zoom Engineering Ltd, and I am currently a software developer at UBC UAS, specializing in the machine learning subteam.

Education

University of British Columbia, BASc in Engineering   Expected Graduation 2028

Experience

UBC Uncrewed Aircraft Systems, Software Developer   Sept 2024 - Present
- Boosted detection accuracy to 98% by integrating YOLO-based machine learning models for autonomous drones
- Improved model performance by 32% through strategic mAP analysis and optimization
- Collaborated cross-functionally to integrate software and hardware

Zoom Engineering Ltd., Junior Engineering Intern   April 2024 – May 2024
- Streamlined design processes by partnering with clients to define clear technical requirements.
- Authored comprehensive technical documentation, supporting successful project execution.
- Utilized AutoCAD to produce precise floor plans for electrical and mechanical services.

Programming Tutor, President   Sept 2021 – April 2024
- Designed and instructed Python programming courses and game development with Unity
- Prepared 80+ students for the Canadian Computing Competition by teaching fundamental programming theories and practising DMOJ problems

Pacific National Exhibition, Concessions Attendant   May 2022 - March 2024
- Boosted customer satisfaction by efficiently resolving inquiries and operational issues
- Operated the point of sales system and ensured timely food and beverage delivery in a fast-paced setting

Projects

AetherShell – AI-Powered Terminal Assistant   April 2025 – Present
- Built an AI-integrated terminal to interpret and execute terminal commands conversationally
- Designed a memory-aware state system for non-interactive terminals using context chaining
- Added test-path validation, and self-healing directory recovery logic

AI Noise Source Prediction and Forecast   March 2025 - Present
- Developed IoT system using Raspberry Pi Zero 2 W to track real-time noise levels across campus
- Implemented the YAMNet AI model from TensorFlow to classify noise sources in real-time
- Enabled data visualization with NumPy and Matplotlib; developing a Flask-based backend for public display

Bluetooth Tracking Robot   April 2024
- Developed a robot using a Raspberry Pi to track and follow a remote device by monitoring RSSI signal strength
- Enhanced tracking accuracy by 25% by created a signal smoothing algorithm.

Technical Skills

Languages: Python, C, C#, SQL, Java

Technologies: HTML, CSS, TensorFlow, Ultralytics, MySQL, Matplotlib, Git