Anant Khanna

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Education

University of British Columbia, BASc in Engineering — Expected Graduation 2028

Experience

UBC Unmanned Aircraft Systems, Software Developer — Sept 2024 - Present

- Implementing machine learning models and neural networks for aerial systems to enhance autonomous object detection, localization and classification
- Utilizing the Ultralytics API for deploying advanced YOLO-based models
- Optimized model performance by calculating and comparing mAP values
- Collaborating with teams to align software and hardware requirements with competition requirements

Zoom Engineering Ltd., Junior Engineering Intern — April 2024 – May 2024

- Collaborated with clients to design technical requirements, translating complex designs into clear plans
- Developed detailed technical documentation and support plans
- Utilized tools such as AutoCAD to design floor plans and draft electrical and mechanical requests

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

- Provided exceptional customer service, addressing attendee inquiries and resolving issues
- Operated the point of sales system and ensured timely food and beverage delivery in a fast-paced setting

Projects

AI Noise Source Prediction and Forecast — March 2025 - Present

- Developed IoT system using Raspberry Pi 02W to track real-time noise levels across campus
- Implemented the YAMNet AI model from TensorFlow to classify noise sources in real-time
- Visualized audio information using NumPy and Matplotlib
- Currently Implementing Python backend with Flask API to publicly display audio information

Bluetooth Tracking Robot — April 2024

- Developed a robot using a Raspberry Pi to track and follow a remote device by monitoring RSSI signal strength
- Integrated the Sphinx voice recognition module to allow the robot to activate and follow voice commands
- Implemented an algorithm to smooth out RSSI signal spikes, improving the accuracy of Bluetooth-based tracking

Awards

Canadian Computing Competition Certificate of Distinction — 2022
District Authority Award — 2024
Honour Roll – Fleetwood Park — 2019–2024

Technical Skills

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

Technologies: HTML, CSS, TensorFlow YOLO, Ultralytics, Flask, MySQL, Unity, NumPy, Matplotlib, Git