Benson Yan

(778)-302-9550 | b58yan@uwaterloo.ca | Linkedin | GitHub

Education

University of Waterloo — Waterloo, ON
Bachelors of Computer Science — *2023 – Present*

- Courses: Data Structures and Algorithms, Object-Oriented Programming, Linear Algebra, Calculus, Probability

Experience

Cornerstone Realty Marketing — May 2024 – Aug 2024
Business Analyst & Research Assistant — *Markham, ON*

- Eliminated all data entry errors and saved over 5 hours per project by developing an interactive dashboard that processes demographic data across 147 Toronto neighborhoods for real-estate consultants
- Increased rental prices by 10% by designing demographic models with NumPy and Plotly to optimize amenity choices, enabling consultants to conduct competitive analyses that were previously unattainable
- Proposed several research papers to maximize rental profits by leveraging demographic and market data insights

Waterloo Aerial Robotics Group — Nov 2023 – Present
Autonomy Team Member — *Waterloo, ON*

- Developed a landing pad detection tool with over 90% confidence with Ultralytics YOLOv8 and PyTorch

Projects

Vibify | *React, Next.js, NextAuth, Spotify API, SQLite, Tailwind CSS* — Jul 2024 - Present

- Enhanced music discovery by developing a full stack web application using NextJS and the Spotify API to generate personalized playlists based on user-selected genres
- Significantly improved music recommendation accuracy by over 50% by incorporating user likes and dislikes

Word Hunt Solver | *React, Next.js, Tailwind CSS, Python, Flask, Rest API* — Jun 2024 – Present

- Deployed a full stack web application that processes a board from Word Hunt that generates all valid combinations to the user to achieve a maximum score
- Optimized finding all valid combinations from 8 to 1 second by implementing search within the trie data structure

UFC Predictor | *Python, Jupyter Notebook, scikit-learn, NumPy, pandas, Plotly, Matplotlib* — Aug 2024 – Present

- Achieved over 55% accuracy in UFC fight predictions by developing a predictive model using Random Forest algorithms on prehistoric fight data, enabling forecasting for future fights
- Enhanced fight analysis capabilities and user engagement implementing visualization dashboards with PlotlyÍ›

BDO Future Leaders Challenge Semifinalist | *Powerpoint* — Nov 2023

- Achieved a top 30 ranking among over 300 teams at Wilfrid Laurier University by addressing BDO's client challenges in talent acquisition and retention through innovative AI and Microsoft Azure solutions
- Presented a detailed proposal with financial models to demonstrate the financial feasibility of the strategies

Deloitte & SAP Laurier Case Competition Finalist | *Powerpoint* — Nov 2023

- Secured a top 6 placement among 30+ teams from business schools across Ontario by identifying and proposing solutions to supply chain inefficiencies using cloud-based ERPs and AI, enabling global expansion for the company
- Delivered a comprehensive proposal with financial models to implement H/4HANA software to obtain financial improvements

Technical Skills

Languages: JavaScript, Typescript, Python, C, C++, Java, HTML, CSS, SQL
Frameworks & Tools: React, Next.js, Express.js, Node.js, MongoDB, SQlite, Flask, Tailwind CSS, Git, Linux, Bash
Libraries: NumPy, pandas, Plotly, Matplotlib, TensorFlow, OpenCV, Ultralytics