

Prithvi Paturi

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EDUCATION

Wilfrid Laurier University

Waterloo, ON

Bachelor of Science in Computer Science, Big Data Concentration — Minor in Math

Sept 2022 – Current

- **Relevant Coursework:** Machine Learning, Regression Analysis, Statistics & Probability, Data Mining, Data Visualization, Calculus I/II/III, Linear Algebra

EXPERIENCE

CIBC Capital Markets

Toronto, ON

Software Developer Intern

May 2024 – Dec 2024

- Developed internal applications in **Python**, **Java**, **JavaScript**, and **Azure** that supported **data integration** and reporting workflows across teams
- Automated **ETL pipelines** with **Apache Airflow**, reducing runtime by **30%** and enabling faster access to trading data for analytics teams
- Built monitoring dashboards in **Azure DevOps** to track deployment and runtime status, reducing incident response time by **50%**
- Collaborated with engineering teams to implement automated **API testing** with **REST Assured**, improving data reliability for downstream models

Fresh Water Foods Inc.

Richmond Hill, ON

Web Developer

Jan 2024 – April 2024

- Designed and launched a responsive website, enhancing online presence for potential clients
- Worked directly with the owner to create a user-friendly interface to ensure easy navigation and product display
- Implemented responsive design using **HTML/CSS** and **Bootstrap** ensuring compatibility across various devices and improving user experience

PROJECTS

NBA Player Archetype | *Python, Flask, Scikit-learn, Pandas, NumPy, Matplotlib*

- Developing a machine-learning model that clusters NBA players by playstyle using advanced efficiency and rate statistics
- Engineered normalized **playstyle vectors** and applied **K-Means + cosine similarity** to quantify stylistic similarity
- Implementing **PCA** for dimensionality reduction and deploying a **Flask** web app that visualizes player networks and supports interactive similarity queries
- Built modular preprocessing and **inference pipeline**, preparing for **REST API** integration and cloud deployment

Connect-4 AI | *Python, Pygame*

- Built a fully interactive Connect-4 game with **Pygame**, allowing human vs. AI gameplay
- Implemented AI opponent using **Minimax** with **alpha-beta pruning** and dynamic board evaluation, achieving a **97%** win rate against baseline strategies
- Designed **heuristic board evaluation** functions for horizontal, vertical, and diagonal patterns to enable competitive AI decision-making

TrackME | *Python, JavaScript, Django*

- Developed a personal finance tracker with **Django** backend and **Chart.js** data visualization
- Applied **K-Means clustering** and **Isolation Forest** for anomaly detection, achieving **92%** accuracy
- Integrated **News API** for personalized financial literacy recommendations

EXTRACURRICULARS

Laurier Grappling Club

Waterloo, ON

Graphic Design

Sept 2023 – Present

- Collaborated with club members to establish a cohesive visual identity, ensuring brand consistency across all materials
- Produced high-quality photographs to capture and showcase club events while creating engaging promotional videos, enhancing the clubs' online presence

TECHNICAL SKILLS

Languages: Python, Java, R, C/C++, JavaScript, HTML/CSS

Big Data & Cloud: Databricks, Apache Airflow, PySpark, AWS, Azure

Data Science & ML: Pandas, NumPy, Matplotlib, TensorFlow, PyTorch, Scikit-learn

Frameworks & Web: React.js, Node.js, Django, Flask

Developer Tools: GitHub, Jupyter Notebooks, VS Code, IntelliJ, Eclipse, Visual Studio

Databases: MySQL, MongoDB, PostgreSQL