

# Prithvi Paturi

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## EDUCATION

### Wilfrid Laurier University

Waterloo, ON

*Bachelor of Science in Computer Science (Big Data Systems Concentration) – Minor in Mathematics*

*Sept 2022 – Current*

- **Relevant Coursework:** Artificial Intelligence, Machine Learning, Regression Analysis, Statistical Learning, Statistics & Probability, Calculus I/II/II,

## 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
- Built **monitoring dashboards** in **Azure DevOps** to track deployments and runtime health, cutting incident response time by **40%**
- Designed and implemented automated **REST API** testing with **REST Assured**, improving data reliability and **QA coverage** by **30%**
- Collaborated with engineering teams to integrate **CI/CD** workflows in **Azure DevOps**, streamlining **deployment pipelines** and reducing manual deployment effort by **60%**

### Fresh Water Foods Inc.

Richmond Hill, ON

*Web Developer*

*Jan 2024 – April 2024*

- Built and deployed 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*

- Developed 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
- Implemented **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**

### TrackME | *Python, JavaScript, Django*

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

### Connect-4 AI | *Python, Pygame*

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

## 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 club's online presence by **90%**

## TECHNICAL SKILLS

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

**Cloud:** Databricks, Apache Airflow, PySpark, AWS, Azure

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

**Frameworks:** React.js, Node.js, Django, Flask

**Developer Tools:** Git, VS Code, IntelliJ, Eclipse, Visual Studio

**Databases:** MySQL, MongoDB, PostgreSQL