NAKUL PATEL

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EDUCATION

Wilfrid Laurier University   **Expected Graduation: April 2027**
Bachelor of Computer Science (BCS) and Bachelor of Business Administration (BBA)   *Waterloo, ON*
- Courses: Software Engineering, Artificial Intelligence, Operating Systems, Algorithms and Analysis I, Data Structures I and II, Machine Learning, Computer Networks, Database I, Discrete Structures, and Object-Oriented Programming

WORK EXPERIENCE

Multiverse Computing — *Machine Learning Engineer Intern*   **Sep 2025 – Dec 2025** | Toronto, ON
- Engineered a full end-to-end ML pipeline in **Python**—performing data cleaning, feature engineering, and chronological validation—to forecast player performance using **XGBoost** and **quantile regression** across 13 season-over-season targets.
- Developed probabilistic forecasting models by training **Gaussian-based XGBoost regressors** and running large-scale **Monte Carlo simulations** to generate uncertainty-aware multi-year trajectories suitable for risk-style scenario analysis.
- Applied **K-Means clustering** to segment simulated outcome distributions and deployed interactive **Streamlit apps** visualizing feature importance, reliability scores, and clustered scenario paths for model interpretability.
- Architected a production-grade analytics platform using a **Next.js** frontend and **FastAPI** microservice backend, exposing our ML pipelines through containerized inference endpoints and delivering a client-facing interface for player evaluation.

Definity Financial Corp. — *Automation Engineer Intern*   **Jan 2025 – Apr 2025** | Waterloo, ON
- Developed and maintained automated test scripts for mobile and web applications using **Java**, **JavaScript**, and **XML**, increasing test coverage by **35%** and reducing manual testing efforts by automating repetitive test cases
- Integrated test suites into **CI/CD pipelines** with **Git**, reducing regression testing time by **40%**, enhancing deployment efficiency, and minimizing the risk of production defects through continuous validation and automated quality checks
- Automated **JIRA** query extraction using **VBA**, streamlining sprint and release reporting by calculating key performance metrics and efficiency indicators, driving a **25% improvement** in release planning accuracy and cross-team visibility

Greater Stouffville Chamber — *Data Analyst Intern*   **May 2024 – Aug 2024** | Stouffville, ON
- Automated recurring reporting tasks by integrating **SQL** queries with **VBA** scripts, streamlining data processing workflows and enabling leadership to make faster, more informed strategic decisions
- Developed interactive dashboards with **Power BI** and automated ETL pipelines using **Python (Pandas)** and **SQL**, enabling real-time analysis of membership trends and driving a **20% improvement** in operational efficiency

Riipen Networks Inc. — *Software Developer Intern*   **Jan 2023 – Apr 2023** | Toronto, ON
- Developed a cross-platform web application by building backend services in **Node.js** and running mobile tests in **Xcode**, collaborating with senior engineers through pair programming, Sprint planning, and UAT to deliver production features.
- Engineered high-performance UI components in **React.js** and **JavaScript**, improving responsiveness by **20%**, and automated workflows using **Python** and **Java** scripts—including a RegEx-based grading algorithm.

PROJECTS

Swish - NBA Game Predictor | *GitHub*   **Python | Pandas | Scikit-Learn | XGBoost**
- Developed an end-to-end ML pipeline for NBA outcome prediction using automated **data scraping**, engineered **performance features**, and an optimized **XGBoost classifier**, building reproducible Python modules that transform raw box score data into predictive inputs for high-quality win–loss forecasts.

Echo - Spotify Stats Tracker | *GitHub*   **Node.js | Express | React + Vite | Spotify Web API**
- Developed a analytics platform integrating the **Spotify Web API** with a **Node.js** backend to orchestrate data retrieval and processing pipelines, powering interactive dashboards of listening patterns, top tracks/artists, and session-level insights.

CERTIFICATIONS

JP Morgan Chase Co. | *Software Engineering Virtual Experience Program*   **Jan 2025**
- Developed an interactive interface using **Perspective** and **Python** to provide live **stock price data** with a **live line graph**, improving data accuracy by **20%** and enabling real-time insights for informed investment decisions.

TECHNICAL SKILLS

Languages: Python, Java, VBA, SQL, HTML5, CSS, JavaScript, C, C++
Developer Tools: AWS, Azure, Docker, Git, Jira, Power BI, GitHub, GitLab, CircleCI, Gradle, Linux/Unix, JupyterLab
Libraries/Frameworks: ReactJS, NextJS, NodeJS, Supabase, FastAPI, Pandas, Scikit, Tensorflow, PyTorch, Streamlit
Hard Skills: Artifical Intelligence, Machine Learning, CI/CD Piplines, RESTful APIs, Cloud Architecture, Deep Learning
Interests: Music, Chess, Gym, Basektball, Travelling, Superheroes, Video Games, Meditation, Hiking