

Kirtan Patel

814-403-8863 | kirtanmp@umich.edu | [linkedin.com/in/kirtanmp](https://www.linkedin.com/in/kirtanmp)

EDUCATION

University of Michigan

Bachelor of Engineering in Computer Science, Minor in Statistics

Ann Arbor, MI

December 2024

TECHNICAL SKILLS

Languages: Python, C++, C, SQL, PostgreSQL, JavaScript, HTML/CSS, Verilog, R, Java, MATLAB

Frameworks: Hadoop, Hive, Spark, Flask, React, Node, Angular

Developer Tools/OS: VS Code, Visual Studio, Git, Kafka, Linux, Ubuntu, AWS

Libraries: Scikit-learn, PyTorch, Pandas, Pyspark, NumPy, Matplotlib

EXPERIENCE

PNC Bank

May 2024 - Aug 2024

Software Engineering Intern | Pyspark, Apache Hive, Apache Kafka, Apache Sqoop, Teredata

Cleveland, OH

- Collaborated with the lending technology division, focusing on scalable data intake and processing within the Machine Analytics and Information ecosystem.
- Implemented complex data workflows using **Pyspark** to process large datasets, improving data reliability and processing time for critical lending operations.
- Utilized **Apache Hive** for querying and managing large datasets warehoused in Hadoop and **Apache Sqoop** for datasets in **Teredata**, ensuring seamless data access for analytics purposes.
- Streamlined data integration tasks with **Apache Kafka**, enabling real-time data feeds and enhancing communication between varied data processing components.
- Conducted thorough data analysis and transformation in MAI tables, facilitating accurate and actionable insights for downstream teams and stakeholders.

Shared Technology Solutions

Jan. 2024 – May 2024

Computer Consulting Intern | Distributed Systems, Agile Workflow, Distributed File Systems

Ann Arbor, MI

- Advised on best practices for **distributed data management**, ensuring consistency, fault tolerance, and high availability across geographically dispersed nodes.
- Collaborated with cross-functional **Agile** teams to streamline deployment processes, resulting in a **30 percent** reduction in time-to-market for distributed applications.
- Provided expert-level support and troubleshooting for **distributed system** issues, reducing downtime by **25 percent** and ensuring client business continuity.

Michigan FinTech

June 2020 – Dec 2023

Algo-Trading Development Team Lead | Python, Scikit-learn, PyTorch, NumPy, Pandas

Ann Arbor, MI

- Spearheaded a dynamic team of 10 software engineers in the design and deployment of a sophisticated algorithmic-trading program, achieving a marked **25 percent** increase in trade efficiency and profitability.
- Pioneered an in-depth exploration and analysis of complex trading and Machine Learning models, using a variety of **Scikit-learn**, **PyTorch**, **Pandas**, and **Numpy**.
- Orchestrated and facilitated educational workshops aimed at upskilling team members in algorithmic trading principles, fostering a collaborative and knowledgeable work environment, and enhancing overall project output.

PROJECTS

Algorithmic Trading Program | *Python, Pandas, NumPy, Matplotlib, TA-Lib*

April 2022 – Present

- Created a fully automated Options trading program using **Python**.
- Implemented a trend-based automated trading strategy leveraging **Bollinger Bands** and **Exponential Moving Averages**.
- Monitored paper trading performance in the open market.
- Achieved a **52 percent** return on initial investment in a one-month testing sample.

Instagram Clone Web Application | *Python, Rest API, Flask, ReactJS, SQL*

January 2024 – March 2024

- Developed a full-stack Instagram web application using **python** with **Flask** and **ReactJS** as the frontend.
- Created a **REST API** to handle user requests to POST, GET, and DELETE from the database.
- Implemented full Instagram functionality including, login authentication, liking, commenting, posting, and scrolling.