Harshit Panwar

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Education

New Jersey Institute of Technology — September 2021 – May 2025
B.S. in Computer Science and Applied Mathematics — GPA: 4.0
Albert Dorman Honors College Scholar

Coursework: Data Structures and Algorithms, Database Design and Management, Programming in Linux, Operating Systems, Linear Algebra**,** Partial Differential Equations, Probability and Statistics

Skills

Languages: Python (NumPy, Pandas, Matplotlib, BS4), Java (Spring Boot, JUnit), SQL, C/C++, Spark, Bash, HTML/CSS
Cloud: Azure (Virtual Machine, Data Factory, SQL Database), AWS (Step Function, Lambda, DynamoDB, SQS)
Other: Microsoft Graph API, Tableau Server Client, Office365 API, Apache Impala, Git, Agile

Experience

Software Engineering Intern — June 2023 – August 2023
Prudential Financial | Newark, NJ

- Set up backend infrastructure for an automated workflow management system by configuring an AWS Step Function with Lambda, SQS, and DynamoDB, reducing time for file processing and upload by ~60%
- Led a cross-functional team of interns in designing and building APIs using Flask and Google Firestore, successfully delivering a POC for an internal networking web application
- Developed comprehensive tests for Spring Boot microservices, extending code coverage by 80% to meet enterprise standard

Data Engineering and Analytics Co-op — January 2023 – June 2023
Johnson & Johnson | Bridgewater, NJ

- Implemented and deployed an automated solution on an Azure VM by leveraging Tableau and Office365 API leading to a ~35% reduction in overdue tasks, 10 hours/month reduction in manual work, and $15,000 in annual savings
- Refactored legacy code connecting to Apache Impala and Azure SQL Databases to avoid deprecation in the codebase
- Automated table refreshes with data pipelines in Python and Azure Data Factory increasing throughput by ~40%
- Investigated SQL queries to resolve discrepancies between Tableau dashboards to ensure accurate metrics
- Managed a team of co-ops to create an Outlook add-on using Microsoft Graph to promote upskilling within the organization

Undergraduate Research Assistant — May 2022 – Present
New Jersey Institute of Technology | Newark, NJ

- Performed time-series analysis on temperature, density, and velocity data using SciPy to create a peak-finding algorithm identifying an optical phenomenon known as STEVE
- Implemented various quantitative strategies in scripts to process 60 million data points and identify temperature spikes
- Designed 10+ data models using Matplotlib to enhance visual pattern identification for stakeholders
- Developed a batch processing routine for data processing reducing time and memory usage by ~50%

Projects

Recs4Parks — November 2022

- Delivered a full-stack web application during the ACM Hackathon to provide park recommendations to users
- Consolidated and displayed park descriptions, activities, and weather reports using the National Park Service API

Banking Website — August 2022

- Created a mockup using Flask for a banking website from the user view, implementing the following: Checking accounts, Savings accounts, Stock shares, and User Authentications
- Utilized the ‘yFinance’ API to retrieve market data and update user portfolio
- Built an SQLite3 database using SQLAlchemy to host updates on relevant account information

Covid-19 Map — July 2020

- Filtered, extracted, and combined relevant data using ‘Pandas’ framework from 2 datasets on Covid cases and country locations with 100+ metrics
- Mapped the data using ‘Folium’ package to create visual representation of COVID cases that accurately depicted the proportion of cases in a given geographic location