Harshit Panwar

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Education

New Jersey Institute of Technology   2021 – 2025
B.S. in Computer Science and Mathematical Sciences, Concentration in Applied Mathematics   GPA: 4.0
Albert Dorman Honors College Scholar
Coursework: Probability and Statistics, Physics II, Data Structures and Algorithms, Calculus III, Discrete Mathematics, Database Design and Management, Differential Equations, Linear Algebra, Programming in Linux

Experience

Undergraduate Research Assistant – *NJIT*   May 2022 - Present
- Analyzed and identified patterns in Strong Thermal Emission Velocity Enhancement (S.T.E.V.E.) to create a peak-finding algorithm using 'SciPy' module
- Used the Vires API to retrieve satellite data and processed 60 million data points to identify temperature spikes
- Improved visual pattern identification for viewers by creating 6 geographic models with temperature spikes
- Streamlined conversions from dataframes to excel files using 'openpyxl' module

Web Developer – *Lyra Stem*   April 2022 - Present
- Built, deployed, and maintained website through Wix with custom HTML and CSS components
- Embedded code for visuals built through Tableau
- Promoted communication between company and users by setting up contact forms and a chat feature

Undergraduate Research Assistant – *NJIT*   Dec. 2021 - Jan. 2022
- Participated in research with Dr. Afkhami to incorporate physics into a neural network otherwise known as Physics Informed Neural Network (P.I.N.N.)
- Worked with Slurm Workload Manager, Bash, and AFS to run the model on high performance computing clusters

Projects

Banking Website
- 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 updates user portfolio
- Used SQLAlchemy to create a SQLite3 database and query data for updates, i.e. withdrawing/depositing funds, buying/selling shares, updating password/email/address

BasketballPoints
- Built a web-scraper with the 'BeautifulSoup' library that summarized career statistics of past/current NBA players
- Accepted user input and outputted summary through IDE console

Covid-19 Map
- 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

Tumor Classifier
- Classified tumors as malignant using the UCI Machine Learning Repository on breast cancer tumors
- Implemented a KNN algorithm using 'Pandas', 'Numpy', and 'sklearn' resulting in 98% accuracy

Skills

Python (NumPy, Pandas, Flask, SciPy, yFinance, openpyxl, Pygame, TensorFlow, Matplotlib, Folium, BeautifulSoup), Java, C++, SQL, HTML/CSS, AFS, Bash, MATLAB