Harsh Panwar

Bridgewater, New Jersey | (732) 487 1294 | Website: https://harsh-panwar000.github.io/Portfolio
Email: hp56@njit.edu **LinkedIn:** linkedin.com/in/hpanwar **GitHub**: github.com/Harsh-Panwar000

Education

New Jersey Institute of Technology *2021-2025*

B.S. in Computer Science and Mathematical Sciences, Applied Mathematics GPA: 4.0

Albert Dorman Honors College: Dorman Honors Scholar

Coursework: Probability and Statistics, Physics II, Data Structures and Algorithms, Calculus III, Discrete Mathematics, Database Design and Management, Differential Equations, Linear Algebra

Extra Curriculars:

Undergraduate Research Assistant – S.T.E.V.E. *2022-present*

- Used the Vires API to retrieve satellite data from the SWARM satellites
- Identified patterns in Strong Thermal Emission Velocity Enhancement (S.T.E.V.E.) to create a peak-finding algorithm using 'SciPy module
- Analyzed over 60 million data points using peak-finding algorithm
- Created a geographic model for identified peaks using folium module
- Streamlined conversions from dataframes to excel files using 'openpyxl' module

Web Developer – Lyra Stem. *2022-present*

- Built, deployed, and maintained full website through Wix
- Implemented custom components through HTML and CSS

Undergraduate Research Assistant – P.I.N.N. *2021-2022*

- 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, AFS to run model on high performance computing clusters

Projects:

Banking Website: *2022*

- Used Flask framework to create a mockup Banking website from the user view, implementing: 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: *2021*

- Built a small web-scraper with the 'BeautifulSoup' library that summarized career statistics of past/current NBA players

Covid-19 Map: *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

Tumor Classifier *2020*

- 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, HTML/CSS, AFS, Bash, MATLAB