MS Data Science in Finance
Purdue University, Dept. of Statistics

Oracle Certified Professional
Java SE11 Developer

Hitansh Shah

shah1185@purdue.edu | +1 (765)-701-0965 | GitHub

INTERNSHIPS

Nomura Holdings, Inc. — Mumbai, India
Software Engineering Intern — Jan, 2024 – Jul, 2024

- Streamlined financial reporting processes by automating OBIEE reports, reducing creation time by up to 50%
- Developed Unix/Linux shell scripts to automate system processes, enhancing operational efficiencies
- Implemented security upgrades and integrated applications with corporate identity and access control systems.

Indian Institute of Technology Bombay, Environmental Science and Engineering — Mumbai, India
Research Consultant — Sep, 2023 – Aug, 2024

- Spearheaded the development of a self-calibrating, self-diagnosable air quality sensor network to enhance monitoring accuracy and reduce costs.
- Used state-of-the-art ML models to correct readings from a network of low-cost sensors.
- Engineered and implemented an AWS EC2-based data collection portal (DCP) to standardize and clean raw sensor data, ensuring reliable datasets for analysis.
- Creation and upkeep of a dashboard for live monitoring of sensor health and degradation. (link: IITB-DCP)

UnMaze.app, Inc. — Mumbai, India
Software Engineering Intern — Jun, 2023 – Jul, 2023
Research and Development Intern — Jun, 2022 – Jul, 2022

- Project based internship developing a Portfolio Management Service.
- Created an internal library as an extension to the existing PyPortfolioOpt, a portfolio optimizer based on the Black-Litterman model of Risk assessment.
- Scraping, collecting, and organizing data scraped from the NSE India API
- Writing and publication of "Mindful Investing with Mental Accounts": A white paper highlighting the current state of portfolio management among retail investors aimed at spread awareness about other rigorous ways of portfolio management such as the Mental Account Framework, based on a 2010 paper by Statman, Markowitz, Das and Scheid.

KEY PROJECTS

Heatwave and AQI prediction

- End-to-end research project, complete with literature review, data mining and feature engineering to predict heatwave occurrence and intensity using Time series data collected from various sources including India's Bhuvan Satellite Data and NASA's POWER API.
- Used Recurrent Neural Networks with LSTM and GRUs to create an optimal model to predict the temperature one year in advance with average error < 2°C.

DivStripper+: A Dividend Stripping helper

- Reverse engineered the NSE India API to scrape information about announcement dates and ex-dates.
- Compared historical trends to present data to find stocks suitable for dividend stripping.
- Found scrips yielding up to 3% post tax returns within 1 week around ex-date.

CSGO TradeUp Finder

- Scraping Steam Community Market for current market prices for in-game cosmetic items, then using Genetic Algorithms and conventional methods to exploit market imperfections to create profitable trades.
- Found trades with Expected Returns > 20% with minimal risk.

Optimizing Classification and Detection of TB Bacilli using Image Enhancement

- A research project under the guidance of Prof. Archana Bhise, NMIMS' MPSTME that aimed to create preprocessing steps to optimize the detection and visibility of TB Bacilli from ZN-Stained sputum smear images.

EDUCATION

Purdue University, Department of Statistics — West Lafayette, IN
Master of Science, Data Science in Finance, GPA -/4.0 — Aug, 2024 - Present

Indian Institute of Technology Madras — DLP, India
Bachelor of Science, Data Science and Programming, GPA 6.93/10.0 — Dec, 2023

NMIMS, Mukesh Patel School of Technology Management and Engineering — Mumbai, India
Bachelor of Technology, Computer Engineering, GPA 3.69 /4.0 — May, 2024

ADDITIONAL INFORMATION

- **Key Skills:** Python(5 YoE), Java (6 YoE), C/C++, R, pandas, numpy, SQL, SQLite, OracleDB, Tensorflow, Keras, PyTorch, scikit-learn, scikit-image, scipy, AWS, Linux, Darts, Neural Prophet, Flask, Jinja2, Redis, Celery, REST APIs, Data Science, Machine Learning, Computer Vision, Time Series Forecasting, Web Dev, Problem Solving, Corporate action, Financial markets, Recurrent Neural Networks, Image Processing, Signals Processing, Data Analysis, Chess.