Shubham Mishra

Washington, DC, USA | sm242002@bu.edu | 8142064686 | https://www.linkedin.com/in/shubham-24-mishra/
github.com/sm242002

Publications

- **Mention in Newsletter for Extraordinary Success**
  Pennsylvania State University
  `https://www.psu.edu/news/academics/story/intern-interprets-big-data-and-builds-entrepreneurial-skills`
- **GLOB-S Research Lab GIS Map**
  Boston University
  `https://globslab.org/on-going-research-projects/`

Work Experience

Business Intelligence Analyst, Spinnaker Analytics, Boston, MA — May 2024 – Aug 2024

- Preprocessed over 1 million online sales records for 1,142 products across 5 years by aggregating data, identifying discontinued products, and filling missing months using linear interpolation techniques to ensure data continuity.
- Developed and implemented advanced time series models including ARIMA, SARIMA, SARIMAX, Double and Triple Exponential Smoothing, and LSTM for predictive modeling of inventory needs, achieving improved accuracy in forecasts.
- Optimized forecasts by reducing prediction error to less than 30% for 78% of the products and achieving less than 10% error for 45% of the products by fine-tuning and stacking LSTM, ARIMA, and SARIMA models.

GIS Analyst Intern, Boston University, Boston, MA — May 2024 – Jan 2025

- Automated geospatial data processing using Python and ArcGIS, improving spatial analysis accuracy by 25%.
- Implemented predictive analytics (linear regression, ARIMA, SARIMA) for land use forecasting, achieving 92% R^2 accuracy.
- Leveraged AWS (S3, Lambda) to automate real-time geospatial updates, reducing manual data retrieval time by 15%.

Data Analyst Intern, Croptix, State College, PA — June 2022 – Aug 2022

- Analyzed 535,000+ rows of agricultural data using SQL, Python (Pandas, NumPy), enhancing yield prediction accuracy by 12%.
- Designed logistic regression models (85% accuracy) to predict crop health, improving forecasting capabilities for farm owners.
- Built Power BI dashboards tracking key agronomic KPIs, cutting decision-making time by 20%.

Data Analyst Intern, Intelligent Direct, Boston, MA — June 2022 – Aug 2022

- Developed machine learning models (XGBoost, LSTM) to forecast sales trends, increasing revenue prediction accuracy by 22%.
- Optimized SQL queries for database restructuring, reducing query execution time by 45%.
- Created 10+ interactive Tableau dashboards for business intelligence, enabling executives to track KPIs in real-time and make data-driven decisions 30% faster. Integrated SQL-based data pipelines to automate data updates, ensuring 99% dashboard accuracy.

Research Assistant, Boston University, Boston, MA — Jan 2024 – May 2024

- Led a data-driven research project on predictive modeling, increasing forecasting accuracy by 25% for 340+ product categories.
- Applied XGBoost and regression analysis to analyze relationships in magnesium production, improving decision-making by 15%.
- Developed interactive Tableau dashboards that visualized key research findings, cutting data interpretation time by 30%.

Projects

Yelp Business Insights (Big Data, Google Cloud, Apache Spark, SQL, Tableau)

- Processed 9GB of raw data using Google Cloud Storage & Dataproc to identify top-performing businesses. Applied Spark MLlib for clustering and NLP (tokenization, topic modeling) on 7M+ reviews, identifying sentiment trends. Used BigQuery GIS to map geographic trends, providing location-based business intelligence insights.

Car Crash Analysis in Chicago (Python, GeoPandas, Folium, Scikit-Learn, SQL)

- Analyzed 1.2M+ traffic crash records using GeoPandas & Python, uncovering 200+ accident hotspots. Conducted time-series analysis to identify peak crash times, assisting city planners in improving traffic safety. Developed clustering models to group crash causes, leading to targeted infrastructure improvements.

Flood Detection System (Machine Learning, Python, Google Earth Engine, GIS)

- Processed 18 global flood event datasets from Sentinel-1 & Sentinel-2 satellites, achieving 94% accuracy in flood classification. Built GIS-enabled dashboards to assist government agencies in optimizing evacuation plans.

Education

- **M.S. in Business Analytics**
  Boston University, Boston, Massachusetts, USA
  Awarded $18,000 Merit Scholarship
- **B.S. in Data Science**
  Pennsylvania State University, State College, Pennsylvania, USA
  Dean's List for Sophomore Year