Shubham Mishra

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Portfolio Website

- **mishrashubham.com** Created using WordPress, CSS, HTML, Figma, Illustrator and Photoshop

Education

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

Work Experience

Software Engineer, VSLN International September 2025 – Present

- **S:** Needed a reliable cross-platform mobile application with offline support and real-time analytics to improve visibility into key metrics and user behavior.
- **T:** Led end-to-end development, integration, and post-deployment technical ownership while embedding analytics and KPI tracking into the app.
- **A:** Built the application using Flutter and Dart with secure HTTPS APIs, implemented SQLite/local JSON storage for offline persistence, designed scalable data models, and embedded in-app dashboards using linear regression and ML models; validated workflows with Firebase and partnered with Sales, Product, and Engineering on delivery and optimization
- **R:** Delivered a scalable, analytics-driven mobile app that improved real-time KPI visibility, supported data-driven decisions, and increased adoption through reliable offline functionality and optimized integrations

Marketing Data Analyst, Community Dreams Foundation Jan 2025 – September 2025

- **S:** Healthcare marketing initiatives needed data-driven insights and compelling visual communication to improve patient engagement and community outreach effectiveness
- **T:** Develop comprehensive analytics solutions and create visually compelling marketing materials that translate complex medical data into actionable insights and accessible patient education materials
- **A:** Implemented advanced analytics pipelines using Python and SQL, created interactive dashboards with Tableau and Power BI, designed healthcare marketing materials using Adobe Creative Suite and Figma, and developed responsive websites using HTML, CSS, JavaScript, and WordPress with custom themes
- **R:** Improved patient engagement by 35%, increased community outreach effectiveness by 28%, and enhanced data-driven decision making across healthcare marketing campaigns with real-time analytics and visual storytelling

UX Designer & GIS Engineer, GLOB-S Research Lab, Boston, MA Jan 2024 – Jan 2025

- **S:** Research lab needed comprehensive data visualization solutions and automated geospatial processing to improve land-use forecasting accuracy and reduce manual processing delays
- **T:** Lead predictive modeling projects, automate data processing workflows, and develop interactive dashboards for research data visualization and stakeholder communication
- **A:** Built Python/ArcGIS data processing pipelines, implemented ARIMA/SARIMA time series models in R and PySpark, deployed AWS Lambda functions for real-time updates, created comprehensive visual identity systems with brand guidelines, and developed responsive websites with custom WordPress themes
- **R:** Improved spatial analysis accuracy by 25%, reduced manual data retrieval time by 15%, increased forecasting accuracy by 25%, and enhanced lab outreach by 50% through improved data visualization and automated workflows

GIS Analyst Intern, Boston University, Boston, MA May 2024 – Aug 2024

- **S:** Geospatial data processing was manual and time-consuming, causing delays and inaccuracies in land-use forecasting and spatial analysis projects
- **T:** Automate geospatial data processing workflows and implement predictive analytics for land use forecasting to improve accuracy and efficiency
- **A:** Automated geospatial data processing using Python and ArcGIS, implemented predictive analytics (linear regression, ARIMA, SARIMA) achieving 92% R^2 accuracy, leveraged AWS (S3, Lambda) for real-time updates, and used SQL (PostgreSQL, PostGIS) to clean and process 10,000+ geospatial data points
- **R:** Improved spatial analysis accuracy by 25%, achieved 92% R^2 accuracy in land use forecasting, reduced manual data retrieval time by 15%, and enhanced decision-making capabilities

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

- **S:** Research lab needed better visualization and outreach capabilities for 340+ product categories with limited resources for data analysis and communication
- **T:** Lead predictive modeling project and develop interactive dashboards to improve forecasting accuracy and enhance research outreach effectiveness
- **A:** Applied XGBoost and advanced regression analysis techniques, built comprehensive Tableau dashboards with interactive visualizations, drafted research papers using LaTeX, implemented data pipeline automation using Python and SQL, and analyzed relationships in magnesium production

- **R:** Increased forecasting accuracy by 25% for 340+ product categories, enhanced lab outreach by 50%, improved decision-making by 15%, and cut data interpretation time by 30% through professional data visualization and automated analytical workflows

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

- **S:** Farm owners lacked actionable insights for crop health and yield prediction, leading to suboptimal agricultural decisions and reduced profitability
- **T:** Analyze 535K+ rows of agricultural data and build predictive models to enhance crop yield prediction and provide data-driven recommendations for farm operations
- **A:** Used SQL and Python (Pandas, NumPy) for data cleaning and preprocessing, designed logistic regression models (85% accuracy) and XGBoost models for yield prediction, created interactive Power BI dashboards with real-time analytics, and developed data visualization solutions using Tableau
- **R:** Enhanced yield prediction accuracy by 12%, achieved 85% accuracy in crop health prediction, improved agricultural decision-making by 15%, and cut decision-making time by 20%, providing farmers with actionable insights for optimizing crop production and resource allocation

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

- **S:** Inventory forecasts for 1,142 products were inaccurate due to sparse and discontinuous data, causing excess inventory costs and supply chain inefficiencies
- **T:** Develop advanced time-series models and business intelligence solutions to improve forecast accuracy, optimize inventory planning, and create compelling data visualizations for stakeholders
- **A:** Preprocessed 1M+ records using Python/Pandas, filled missing data with linear interpolation, fine-tuned ARIMA, SARIMA, LSTM, and ensemble models using PyTorch, conducted hypothesis testing for validation, and created interactive dashboards with Tableau and Power BI
- **R:** Reduced prediction error to $<30\%$ for 78% of products and $<10\%$ for 45%, saving $250K annually in inventory costs while improving stakeholder decision-making through enhanced data visualization

Data Analyst Intern, Intelligent Direct, Boston, MA — May 2021 – Aug 2021

- **S:** Executives needed real-time KPI tracking and accurate revenue forecasting to support strategic decision-making and business growth initiatives
- **T:** Develop machine learning models and interactive dashboards for revenue forecasting and executive reporting with high accuracy and reliability
- **A:** Built XGBoost and LSTM models for sales trend forecasting, optimized SQL queries for database restructuring, created 10+ interactive Tableau dashboards for business intelligence, and integrated SQL-based data pipelines to automate data updates
- **R:** Increased revenue prediction accuracy by 22%, reduced query execution time by 45%, enabled executives to track KPIs in real-time and make data-driven decisions 30% faster, and ensured 99% dashboard accuracy through automated data pipelines

Tech Stack

- **Programming Languages:** Python (Pandas, NumPy, Scikit-Learn, PyTorch, TensorFlow, Keras, Matplotlib, Seaborn), R, SQL (Advanced), Scala, Java, JavaScript, C++, Go, PowerShell, Bash/Shell Scripting, TypeScript, Kotlin, Swift
- **Data Science & ML:** Machine Learning (XGBoost, LightGBM, CatBoost, LSTM, GRU, ARIMA, SARIMA, Prophet, Random Forest, SVM), Deep Learning, Neural Networks, NLP, Computer Vision, Time Series Forecasting, Clustering (K-means, DBSCAN, Hierarchical), Regression, Classification, Ensemble Methods, Feature Engineering, Model Deployment, MLOps, AutoML
- **Big Data & Cloud:** Hadoop, HDFS, Apache Spark, PySpark, Kafka, Airflow, Databricks, Google Cloud (BigQuery, Dataproc, Cloud Storage, Compute Engine, Vertex AI), AWS (S3, Lambda, Glue, EMR, Redshift, RDS, SageMaker), Azure (Synapse, Data Factory, Blob Storage, Machine Learning), Snowflake, Delta Lake, Apache Beam
- **Data Visualization & BI:** Tableau, Power BI, Looker, Matplotlib, Plotly, Folium, GeoPandas, Seaborn, D3.js, Chart.js, SAP Analytics, Salesforce Analytics, QlikView, MicroStrategy, Grafana, Kibana
- **Databases & Storage:** MySQL, PostgreSQL, MongoDB, Cassandra, Redis, BigQuery, ClickHouse, Elasticsearch, Neo4j, SQLite, NoSQL, Data Warehousing, ETL/ELT Pipelines, Data Lake, Data Mesh, OLTP, OLAP
- **GIS & Spatial Analysis:** ArcGIS, QGIS, Google Earth Engine, GeoPandas, PostGIS, Spatial SQL, Geospatial Machine Learning, Carto, Mapbox, Leaflet, OpenStreetMap
- **Statistical Analysis:** Hypothesis Testing, A/B Testing, Statistical Modeling, Bayesian Statistics, Monte Carlo Simulation, Experimental Design, Causal Inference, Time Series Analysis, Survival Analysis
- **Business Intelligence:** KPI Development, Dashboard Creation, Performance Metrics, Data Storytelling, Executive Reporting, Business Process Analysis, Requirements Gathering, Stakeholder Management
- **Office & Collaboration:** Google Suite, Microsoft Office (Advanced Excel: VLOOKUP, PivotTables, Macros, Power Query, Power Pivot), Slack, Teams, Jira, Confluence, Asana, Trello
- **Web Development:** HTML5, CSS3, JavaScript, WordPress, React, Node.js, Angular, Vue.js, Django, Flask, Responsive Design, Full-Stack Development, Progressive Web Apps
- **Enterprise Software:** SAP, Salesforce, ServiceNow, Oracle, Microsoft Dynamics, ERP Systems, CRM Systems, Business Process Management, Workflow Automation