Arjun Mangipudi

(571)-471-8842 | arjun.mangipudi@gmail.com | linkedin.com/in/arjun-mangipudi/ | https://arjun-mangipudi.netlify.app/

EDUCATION

George Mason University M.S. in Data Analytics Engineering | 2025 - 2027

Purdue University B.S in Computer Engineering | 2021 - 2025

Concentration: Artificial Intelligence and Machine Learning

Relevant Coursework: Machine Learning**,** Data Structures, Python for Data Science, Artificial Intelligence, Software Engineering, Open-Source Software, Object Oriented Programming, Computer Networks, Signals and Systems

SKILLS AND CERTIFICATIONS

Languages/Frameworks: Python, R, SQL, C++, TypeScript, JavaScript, React, Angular, React, Next.js, Pandas, NumPy, VBA
Other Technical Tools: Excel, Power BI, Microsoft Tableau, AWS, Docker, MongoDB
Dev Tools: Visual Basic Studio, GitHub, Git, Vim
Certifications: AWS Cloud Foundations, Automation & Advanced Techniques with Copilot in Excel

WORK EXPERIENCE

Intel - *Design Enablement Intern* May 2023-August 2023

- Developed an Excel-based training management application integrating data from three vendor systems, reducing onboarding time by ~20% and improving course accessibility for over 150 employees
- Automated internal reporting workflows by developing VBA and Python scripts to aggregate and clean support ticket data, cutting manual analysis time by 40%
- Built interactive Excel dashboards to visualize workflow efficiency and recurring support issues, helping management identify top pain points and prioritize fixes

PROJECTS

NYC Vehicle Collision Analytics October 2025 – December 2025

Graduate Research Project – George Mason University

- Engineered an integrated collision datasets (~10M records) from NYPD Open Data and NOAA weather sources using Pandas, NumPy, and Polars, enabling multi-factor analysis of vehicle, person, and environmental attributes
- Developed geospatial collision hotspot visualizations using GeoPandas, Shapely, Folium, and Matplotlib, mapping spatial clustering patterns that align with NYC's known high-risk road segments
- Implemented preprocessing pipelines using Scikit-learn for feature encoding, normalization, and cross-dataset alignment, supporting clean model input and reproducible analysis
- Delivered data-driven insights for policy stakeholders by translating statistical findings and spatial patterns into actionable roadway-safety recommendations

Global Firm-Level Data Analysis using World Bank Surveys August 2025-October 2025

Graduate Research Project – George Mason University

- Conducted global firm-level analysis on 1M+ records from the World Bank Enterprise Surveys from 2006–2024 using Python, R, SQL, and AWS to uncover how governance, education, and health factors influence firm performance across 150+ countries
- Automated data preprocessing and outlier detection using AWS Glue DataBrew and Pandas, improving data integrity across and strengthening the reliability of large-scale economic indicators

Social Media Web App for Food Tracking and Recommendations December 2024-May 2025

Capstone project – Purdue University

- Led development of a full-stack food tracking platform using React, Node.js, and MongoDB Atlas, allowing users to log meals, share posts, and receive personalized meal suggestions
- Designed and deployed user authentication, meal logging, user feeds, and AI-powered meal recommendation features as microservices with RESTful APIs
- Optimized MongoDB Atlas schema design for user data, meal logs, and interactions, enabling faster queries and supporting 2x more concurrent users without performance degradation

AI-Based Package Recommendation Project September 2024-December 2024

- Designed an AI-driven scoring system that evaluated over 100 open-source packages based on metrics such as contributor responsiveness helping developers quicky identify high-quality, actively maintained libraries for integration
- Built REST and GraphQL APIs using Node.js to deliver live package quality insights, allowing developers to make faster, data-driven decisions
- Collaborated on algorithm design and metric weighting, resulting in a scoring system that increased recommendation accuracy by 35% in pilot tests