Arjun Mangipudi

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EDUCATION

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

Purdue University   Bachelor of Science 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, C/C++, TypeScript, JavaScript, SQL, React, Angular, Node.js, Next.js, HTML, VBA
Other Technical Skills: FastAPI, MongoDB, Docker, AWS S3, AWS Lambda, Excel, Microsoft Suite
Dev Tools: Git, GitHub, Vim, Visual Studio Code
Certifications: AWS Cloud Practitioner Essentials, Automation & Advanced Techniques with Copilot in Excel

WORK EXPERIENCE

Intel - *Design Enablement Intern*   May 2023-August 2023
- Designed an Excel based application through Visual Basic Studio to allow employees to select courses through three Intel partnered vendors (Siemens, Anys, and Synopsys) enhancing employee access and management of training opportunities
- Analyzed the ticket management system to develop data-driven visualizations, identifying key trends, recurring issues, and inefficiencies to support decision-making and enhance process efficiency
- Enhanced Intel teams by creating and updating the Design Enablement SharePoint web page to allow for employees to have easier access to information and contacts

PROJECTS

AI-Based Package Recommendation Project   September 2024-December 2024
- Engineered metrics such as GitHub commit responsiveness to evaluate 100+ open-source packages using typescript
- Developed both REST and GraphQL API endpoints using Node.js to dynamically retrieve and serve package metadata stored in an AWS S3 bucket, enabling flexible and scalable frontend data queries
- Collaborated on metric design and algorithmic logic to generate package quality scores and exposed results through structured API endpoints for dynamic frontend rendering

Social Media Web App for Food Tracking and Recommendations   December 2024-May 2025
- Architected a full-stack social media platform using React, Vercel, Render, and MongoDB Atlas to enable meal logging, sharing, and AI-powered recommendations
- Designed and deployed 10+ RESTful API endpoints in under two weeks to support user authentication, meal logging, personalized feeds, and AI-powered meal recommendations
- Optimized MongoDB Atlas schema design for user data, meal logs, and interactions, enabling faster queries and supporting 2x more concurrent users without performance degradation
- Designed the homepage and primary user interfaces (excluding login/registration) using CSS and React with a focus on responsive design and intuitive UI/UX

Predictive Modeling of Cryptocurrency Prices Using Machine Learning   May 2024-August 2024
- Built and evaluated multiple machine learning models (linear regression, neural networks) to forecast cryptocurrency prices, testing on thousands of historical samples and measuring performance with R^2, MSE, and MAE metrics

AI Podcast Summarizer Web Application   June 2025-July 2025
- Developed a full-stack AI-powered web application that transcribes and summarizes podcast/audio files using React, Next.js, TypeScript, and Tailwind CSS for a modern and responsive UI
- Integrated OpenAI's GPT-3.5 turbo model for generating accurate and concise summaries, with audio transcriptions handled via OpenAI Whisper
- Utilized Docker to containerize FastAPI backend, reducing deployment time by 40% and ensuring reproducible, modular development
- Configured AWS S3 for secure cloud-based media file storage and retrieval, enabling seamless audio/video uploads and access from the frontend

SPECIAL ACTIVITES

Engineering in the World of Data Learning Community   August 2021-May 2022
- Led the development of a comprehensive paper analyzing Purdue's existing transportation safety strategy, coordinating research efforts and synthesizing findings within the learning community