Jonathan Essis

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Summary

Experienced Full Stack Engineer with a strong foundation in solution architecture and scalable software development. Designed and deployed mobile applications serving thousands of users while integrating advanced AI features. Demonstrates expertise in guiding engineering teams and coordinating development activities through effective architecture definition and business requirement analysis. Eager to leverage technical and leadership skills as a Principal Solutions Architect.

Education

The Pennsylvania State University   **2024**
B.S, Computer Science, Mathematics, Music Technology

Experience

Kouris LLC   **Jun 2024 - Dec 2024**
Fullstack Engineer   *Remote*
- Engineered a full-stack mobile application using React Native (TypeScript) with Node.js/Python backends and PostgreSQL, defining a scalable architecture to track 30 key data points per clothing item and enable outfit recommendations for up to 20,000 users.
- Collaborated with project managers and product designers to gather requirements and integrate adaptive AI features—including a custom-trained Siamese neural network—to enhance outfit generation by accurately learning item compatibility.
- Coordinated the integration of multiple API pipelines (Cloudinary, Lykdat, Serpapi, OpenAI) to automate image detection, background removal, and metadata extraction, streamlining wardrobe organization.
- Supported engineering teams by introducing innovative AI techniques, resulting in a scalable recommendation engine that accommodates infinite combinability between wardrobe items.

KPMG   **Jun 2022 - Sep 2023**
Software Engineer Intern   *Remote*
- Conducted advanced UI testing on the Ignite AI platform, identifying and reporting over 300 bugs to enhance document ingestion and annotation workflows while supporting reliable weekly software builds.
- Developed and deployed prototype applications on AWS, Azure, and GCP, benchmarking enterprise NLP solutions against KPMG's in-house platform to guide strategic design enhancements and inform solution architecture decisions.
- Architected and prototyped a gimbaled face-tracking camera using deep learning, producing a fully functional model that showcased potential business applications and contributed design concepts during business requirement meetings.
- Collaborated in an agile, cross-functional team, leveraging Docker and DevOps practices to streamline back-end development and coordinate continuous process improvements.

Projects

Outfit Recommendation System API
- Engineered a machine learning API using a Siamese neural network to generate personalized outfit recommendations by processing raw JSON/CSV wardrobe data
- Developed modular data preprocessing and training pipelines in Python, integrating visualization tools to monitor model performance and optimize compatibility scoring
- Implemented a RESTful API with comprehensive logging, enabling real-time recommendation serving and efficient troubleshooting during experimental testing

RaffleLeader
- Reworked PHP, HTML, and CSS to reposition the toolbar per project lead's request, streamlining user interactions in a WordPress raffle plugin
- Developed a standalone React web app prototype in Javascript, CSS, and, HTML that reimagined the raffle system's front-end, modernizing the interface and enhancing usability

Skills

- **Backend**: Python, NumPy, TensorFlow, PyTorch, Matplotlib, Flask, Node.js, Java, C, C++, PostgreSQL, SQL, Software Development
- **Frontend**: React, React Native, TypeScript, HTML, CSS
- **Development Tools**: Git, Docker, DevOps
- **Soft Skills**: Technical Writing, Documentation, Data Visualization, Debugging, Testing, Presentation Skills
- **Architecture & Methodologies**: Solution Architecture, Business Requirement Analysis, Design Concepts