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Matthew Boubin

Data Engineer

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Career Goals

Data Engineer with 7 years of experience designing, testing, and optimizing scalable software solutions who has become an expert in leading cross-functional teams, defining goals for robust projects, and implementing best software development practices to enhance performance and maintainability of backend services. Currently seeking new opportunities to contribute to a highly effective software development team focused on delivering top quality products.

Skills

Languages
Python (Flask, FastAPI, Django)
Java (Spring)
Javascript (Node.js)
Typescript
SQL (PostgreSQL)
MongoDB

Tools and Libraries
Cloud (GCP, VertexAI, AWS)
CI/CD (Terraform)
Docker
Scala
Hadoop
Spark

Professional Experience

Data Engineer
Nov 2021 - Present

NYU Wagner - New York, NY

- Integrates data from external API services into a local Customer Relationship Management (CRM) system using **Scala**
- Develops and Maintains a custom **GenAI** chatbot for the University's public website using a **FastAPI** web framework, **Hadoop**, Gemini-1.5-Pro API, **Google Cloud Platform**, and SKLearn Vector Store
- Leads a technical debt cleanup initiative that has resulted in a migration saving the organization $100k annually
- Supervises 4 junior software developers as their hiring manager.

Embedded Software Engineer
July 2020 - July 2021

GE Appliances - Louisville, KY

- Used a proprietary **Python** SDK to extend the functionality of the uFactory 6-axis robotic arm
- Developed software in **C++** for fault detection equipment using the MSP430 DSP Microcontroller
- Prototyped a **PostgreSQL** database warehousing solution for business critical image data used for business intelligence analysis

Embedded Software Developer
May 2018 - Feb 2020

D'Angelo Technologies - Dayton, OH

- Developed embedded systems prototypes for non-invasive diagnostic equipment using electromagnetic interference as an indicator
- Responsible for two Phase I Small Business Innovation Research Contracts the United States Department of Defense

Research Assistant
May 2017 - May 2018

Miami University - Oxford, OH

- Developed control software in C++ for the Miami University Power Electronics Laboratory using the TI C2000 microcontroller architecture

Education

Miami University
Oxford, OH
B.S. Computer Engineering
May 2018

Patents and Publications

Non-invasive diagnostic systems and methods, 2023
MDPI Sensors, 2019
IEEE Energy Conversion Congress and Exposition, 2018
SPIE Smart Biological and Physiological Sensing Technology, 2019
IEEE Energy Conversion Congress and Exposition, 2019