Matthew Boubin

Software Engineer

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Professional Experience

Software Engineer - Data
Dec 2021 - Present

NYU Wagner - New York, NY

- Manages data pipelines connecting external data services to a local CRM system using a **Django** web service and **Postgresql** hosted on **AWS**.
- Develops and Maintains a custom **GenAI** chatbot for the University's public website using a **FastAPI** web framework, Gemini-1.5-Pro API, **Google Cloud Platform**, **Streamlit** 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
Aug 2020 - Apr 2021

GE Appliances (contract) - Louisville, KY

- Used a proprietary **Python** SDK to extend the functionality of the uFactory 6-axis robotic arm and other electromechanical systems
- Developed software in **C++** for fault detection equipment using the MSP430 DSP Microcontroller
- Supervised a senior design team at the University of Louisville that completed a functioning **Node.js** application to display agricultural measurements remotely to a client.

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 | IEEE ECCE, 2019
SPIE Smart Biological and Physiological Sensing Technology, 2019