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Python - Flask/Django - Optimisation - SQL
Kubernetes - Angular - Agile - Jira

Senior Software Engineer: Flexciton

(October 2020 - Present)

London, United Kingdom

Python, SQL, Flask, Optimisation, Kubernetes, Jira

At Flexciton, I specialize in developing cutting-edge scheduling solutions for semiconductor wafer manufacturing. My role involves tackling some of the most challenging optimization problems in the industry, requiring innovative thinking and precise engineering. As my team's main backend developer, I am responsible for enhancing the functionality and reliability of our software, which directly impacts the efficiency and effectiveness of semiconductor production processes.

- **Optimization and Scheduling:** Contributed in the development of an advanced scheduling system that optimizes the manufacturing process of semiconductor wafers, resulting in significant improvements in production efficiency and throughput.
- **Backend Development:** Utilized Python, Kubernetes, and SQL to implement core features, ensuring high performance and scalability. Developed tools for tracking key performance metrics and analyzing final schedules.
- **Team Leadership:** Guided junior developers, conducted thorough code reviews, and refactored large portions of our legacy codebase to improve maintainability and performance. Played a key role in architectural design decisions to ensure the system's scalability and alignment with industry best practices.
- **Collaboration:** Worked closely with cross-functional teams, including data scientists and DevOps engineers, to deliver robust and reliable software solutions. Fostered a collaborative environment that encourages knowledge sharing and continuous improvement.

Senior Software Engineer: Genova Technologies Inc.

(2018 - September 2020)

Cedar Rapids, IA

Java, Python, Angular, Agile, SQL, Django, AWS

During my tenure at Genova Technologies, I had the opportunity to work on three major projects that spanned different industries and technologies. This role showcased my versatility and ability to quickly adapt to new challenges, as I successfully developed software for aircraft combat training, payment processing, and satellite imagery analysis.

- **Collins Aerospace - Air Combat Training System** *February 2019 - September 2020*

Contributed in the development of a sophisticated aircraft combat training system using Java. Collaborated daily with systems engineers and testers in an Agile environment to ensure seamless integration of new features and adherence to stringent quality standards. Developed behavior-driven tests in Python, which were crucial for validating story requirements and enhancing our automated regression testing suite.

- **Laundromat Payment Application** *August 2018 - February 2019*

As the backend lead, I designed and implemented a robust REST API in Django to support a mobile payment application. Developed the Angular-based web portal for laundromat owners, ensuring a user-friendly interface for managing operations. The platform required seamless integration with third-party payment processors and laundry machines, and I was responsible for the secure deployment of the application on AWS Elastic Beanstalk.

- **Satellite Imagery Processing Application**

January 2018 - August 2018

Developed a Flask-based backend to process Sentinel-2 satellite imagery for agricultural applications. The application provided farmers with actionable data on nitrogen requirements for various crops. My work involved designing and implementing a REST API, managing the retrieval and processing of satellite images, and deploying the entire application on AWS Elastic Beanstalk.

Software Engineer: Innovative Software Engineering

Coralville, IA

(2016 – 2018)

C#, .Net, Xamarin, SQL, Jenkins, Angular

At Innovative Software Engineering, I contributed to the development of a .NET web application and a Xamarin-based Android application, designed to interface with vehicle OBD computers for logging driving time. My role also involved writing BDD and unit tests, utilizing SQL for backend data management, and enhancing the Jenkins CI pipeline.

In a separate project, I was part of a two-person team that developed an Angular situational awareness web application. The backend aggregated data from multiple REST and SOAP services operated by the Iowa Department of Transportation, presenting it through intuitive graphs, lists, and other UI elements.

Application Developer: Collective Data Inc.

Cedar Rapids, IA

(2013 – 2016)

C++, SQL

At Collective Data, I developed new modules, enhancements, and customizations for a fleet and asset management application built in C++. My role involved direct communication with customers for requirements gathering, documentation, and writing RFP responses to bid on new projects.

Over time, I progressed to lead developer for new applications and features, overseeing the design and implementation of key components. Additionally, I provided software training and support to clients, ensuring successful adoption and usage of our solutions.

Software Engineering Co-Op: Rockwell Collins

Cedar Rapids, IA

(2010 – 2012)

Ada

As a Software Engineering Co-Op at Collins Aerospace, I gained hands-on experience writing and testing embedded Ada code for adaptive flight displays, translating complex systems requirements into highly reliable software.

The University of Iowa

Iowa City, IA

(2008 – 2013)

B.S. Computer Science