Taylor Turner

Software Engineer

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EXPERIENCE

BASTIAN SOLUTIONS | **SOFTWARE ENGINEER**
1 year | September 2022 – Current | Maryland Heights, MO

- ➜ Utilized Python and .NET C# to create middleware solutions for automation controllers, robots, and vision systems. These solutions improved communication capabilities among peripheral devices and automated statistical data collection for tracking performance.
- ➜ Transitioned products from R&D to manufacturing, focusing on continuous improvement in integration testing and product statistics. Effectively identified and resolved issues, streamlined the product production and documentation, and improved overall product quality.

BECKWOOD PRESS | **ELECTRICAL CONTROLS ENGINEER**
6 years | October 2016 – September 2022 | Fenton, MO

- ➜ Designed electrical systems for custom hydraulic and servo presses, which involved schematic design and the development of controls applications using automation controllers and numerical methods in Python. Advanced target generation, filtering, and linearization algorithms, resulted in a significant improvement in quality of material forming.
- ➜ Facilitated team collaboration to understand and prioritize low-level solutions. Our team grew electrical design processes for accelerated development and integration. Additionally, we created analytic tools through extensive data collection to showcase product performance and competitiveness within the marketplace.

EPIC INC. | **ELECTRICAL CONTROLS TECHNICIAN**
2 years | December 2014 – October 2016 | St. Louis, MO

- ➜ Oversaw the assembly and design of electrical panels and machine wiring for pilot plants, vision systems, and custom machines. The multidisciplinary nature of these products gave the opportunity to be cross-trained in mechanical and process design.
- ➜ Implemented designs that conformed to sanitary/wash-down, Class I Division I, and National Electric Code requirements.

PROJECTS

STACK | **C#, SQL SERVER, REACT.JS**
- ➜ Developed a web application using C#/ASP.NET Core and React/Next.js with TypeScript. This application solves palletization patterns in respect to product dimensions and layer requirements. Consequently, the generated data is transmitted to a robot as location and orientation commands. The application incorporates features such as monitoring peripheral device connection statuses and saving configurations, which are executed using Entity Framework Core and MS SQL Server. The application is patented, providing a robust palletization solution that helps the company maintain high-quality standards across its product line.

PICK | **PYTHON**
- ➜ Continuously improved a Python application responsible for interfacing with the procedure calls of a vision system and serializing communication to robots and automation controllers. The system incorporates a Flask server, allowing an automation HMI to operate other devices via REST API calls. Additionally, data analysis tools enhance the precision of model training and motion planning by leveraging incoming data. This innovative solution simplifies interfacing multiple manufacturers' requirements, allowing scalable and efficient automation process.

MOTION | **AUTOMATION CONTROLLER/PASCAL**
- ➜ Lead the R&D of a specialized motion controller for hydraulic position, velocity, and force control. It incorporates set point modeling for target generation and feedback tuning to enhance accuracy. The control algorithm can be integrated into any automation controller, giving the company's hydraulic applications a competitive edge in the marketplace.

SKILLS

PROGRAMMING

Proficient:
C# • Python • SQL Server • TypeScript • HTML • Automation Controllers

Familiar:
C/C++ • Visual Basic • Blazor • PowerShell • LaTeX

FRAMEWORKS/ASSEMBILES

ASP.NET Core • Node.js • React.js • Flask • gRPC • Entity Framework • ClxDriver • Interop.FRRobot

DEVELOPMENT TOOLS

Visual Studio • Git • GitHub • Azure

METHODOLOGIES

Agile/Sprint • OOP • FMEA • UL 508A • SCADA • Project Management

EDUCATION

RANKEN TECHNICAL COLLEGE
ASSOCIATE'S IN ELECTRICAL CONTROL SYSTEMS
December 2014 | St. Louis, MO

VOLUNTEER

Offensive/Defensive Line Coach, Titans of Troy, IL