

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 design and implement middleware solutions for automation controllers, robots, and vision systems. These solutions improved communication capabilities between peripheral devices, and automated statistical data collection for tracking performance.
- Transitioned R&D products to manufacturing, which involved continuous improvement in integration testing and product statistical changes. Through this process, I identified and resolved issues, streamlined the product production and documentation process, and improved product quality.

BECKWOOD PRESS | ELECTRICAL CONTROLS ENGINEER

6 years | October 2016 – September 2022 | Fenton, MO

- Developed numerical methods and closed-loop control to operate custom hydraulic and servo automation systems. Using automation controllers and python, target generation, filtering, and linearization algorithms resulted in significant improvement in material forming quality.
- Facilitated team collaboration to learn and prioritize low-level solutions. Our team helped grow electrical design structures intended for rapid development and integration. We also created analytic tools from 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

- Assembled and designed electrical panels and machine wiring for pilot plants, vision systems, and custom machines. The multidisciplinary designs of the 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

- A web application built with C#/ASP.NET CORE and React/Next.js using TypeScript. It solves palletization patterns from product dimensions and layer requirements, then sends location and orientation commands to a robot. Devices can be created, and their configurations saved 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 and product line.

PICK | PYTHON

- A Python application that interfaces with a vision system's procedure calls and serializes communication to robots and automation controllers. The system includes a Flask server that allows an automation HMI to operate other devices via REST API calls. Additionally, data analysis tools enhance the accuracy of model training and motion planning using incoming data. This innovative solution simplifies the interface with substitute manufacturers, making the automation process scalable and efficient.

MOTION | AUTOMATION CONTROLLER/PASCAL

- A motion controller specialized in 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 incorporated in any automation controller, making the company's hydraulic applications more competitive in the marketplace.

SKILLS

PROGRAMMING

Proficient:

C# • Python • SQL Server • TypeScript • React.js • Automation Controllers

Familiar:

C/C++ • Visual Basic • HTML Blazor • PowerShell • LaTeX

FRAMEWORKS/ASSEMBILES

ASP.NET Core • Node.js • Flask • Entity Framework Core • log4net • ClixDriver • Interop.FRRobot

DEVELOPMENT PLATFORMS

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