Devon Walker

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Skills

Programming: Golang, JavaScript, TypeScript, Python, SQL, Make, C#, Java, HTML/CSS
Frameworks: React.js, Playwright, gorilla/mux, SciPy
Databases: MySQL, Kafka, Prometheus, Redis, FoundationDB, BoltDB
Tools: Linux, Git, Kubernetes, Docker, Ansible, Vault, Github, Graphana, Splunk, Vim

Experience

Tesla, Inc. Austin, TX

Staff Software Engineer *December 2021 – Present*

- **Data Visualization**: Developed an interactive inventory visualization application with React.js, d3 with SVGs, and Golang Fiber that allowed Operations to identify physical inventory discrepancies in real-time.
- **Observability**: Implemented Open Telemetry tracing across several Golang applications communicating via gRPC and Kafka, greatly reducing fault root cause analysis time.
- **Human Machine Interface**: Developed a tool positioning system in Golang to enable a production worker's torque tool only when the tool is in the correct physical position, as detected by laser and proximity sensors communicating via ModbusTCP.
- **API Design**: Created REST APIs using gorilla/mux to enable complex quality data interactions between industrial scanners, lineside systems, and MES systems.
- **Serial Protocols**: Developed applications that connected Golang applications to production line test equipment communicating with custom serial protocols on TCP sockets.

Staff Automation Engineer *December 2019 – December 2021*
Senior Automation Engineer *April 2018 – December 2019*
Automation Engineer *May 2017 – April 2018*

- **Leadership**: Led a team of 7 automation engineers managing 6 foreign suppliers to deliver the control system of the Vehicle Paint Shop ($20M+) for the company's first international factory in Shanghai.
- **Design Architect**: Drafted an electrical and network architecture specification and managed its execution by 8 automation engineers leading 14 suppliers of Drive Unit equipment ($100M+) to three factories on three continents.
- **Abstraction**: Redesigned PLC MES libraries to make transaction implementations transparent to machine process implementations.

EZSoft, Inc. Malvern, PA

Automation Engineer *October 2012 – July 2015*

- **Data Acquisition**: Developed a C# application and GUI to integrate bespoke embedded devices into an industrial control system to inform process efficiency.

Chemical Engr. Dept., University of Pittsburgh Pittsburgh, PA

Process Control Engineer Internship *May 2011 – December 2011*

Education

Carnegie Mellon University December 2016

Master of Science in Chemical Engineering. 4.0/4.0.

- **Machine Learning**: Thesis on "A neural network potential for nanoporous graphene." Performed molecular simulations on nanoporous graphene to train a feedforward neural network capable of replicating a Density Functional Theory exchange potential.

University of Pittsburgh April 2012

Bachelor of Science in Chemical Engineering. Minor in Computer Science. 3.3/4.0.