

Devon Walker

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Skills	<p>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, Nix</p>	
Experience	Tesla, Inc.	Austin, TX
	<i>Staff Software Engineer</i>	<i>December 2021 – Present</i>
	<ul style="list-style-type: none">• Data Visualization: Designed an interactive inventory visualization application with React.js, d3 with SVGs, and Golang Fiber that allowed material flow teams to identify physical inventory discrepancies and reduce part-shortage production downtimes.• Observability: Implemented Open Telemetry tracing across several Golang applications communicating via gRPC and Kafka, greatly reducing fault analysis time.• Human Machine Interface: Developed a tool positioning system in Golang to enable use of 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: Connected Golang applications to production line test equipment communicating with custom serial protocols on TCP sockets.	
	<i>Staff Automation Engineer</i>	<i>December 2019 – December 2021</i>
	<i>Senior Automation Engineer</i>	<i>April 2018 – December 2019</i>
	<i>Automation Engineer</i>	<i>May 2017 – April 2018</i>
	<ul style="list-style-type: none">• Leadership: Led a team of 7 engineers managing 6 foreign suppliers to deliver the control system of the Vehicle Paint Shop 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 production lines (\$100M+) to three factories on three continents.• Abstraction: Redesigned PLC MES libraries to make transaction implementations transparent to machine process implementations.• Management: Mentored a team of 7 direct reports and conducted over 150 interviews.	
	EZSoft, Inc.	Malvern, PA
	<i>Automation Engineer</i>	<i>October 2012 – July 2015</i>
	<ul style="list-style-type: none">• Data Acquisition: Developed a C# application and GUI to integrate bespoke embedded devices into an industrial control system for sub-second RF process control.	
Education	Chemical Engr. Dept., University of Pittsburgh	Pittsburgh, PA
	<i>Process Control Engineer Internship</i>	<i>May 2011 – December 2011</i>
	Carnegie Mellon University	Pittsburgh, PA
	<i>Master of Science in Chemical Engineering. 4.0/4.0.</i>	<i>December 2016</i>
	<ul style="list-style-type: none">• Machine Learning: Thesis involved performing hundreds of molecular simulations on nanoporous graphene to train a feedforward neural network to replicate a Density Functional Theory exchange potential, reducing future simulation times by >99%.	
	University of Pittsburgh	Pittsburgh, PA
	<i>Bachelor of Science in Chemical Engineering. 3.3/4.0.</i>	<i>April 2012</i>
	<i>Minor in Computer Science.</i>	