

# Devon Walker

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Skills	<p><b>Programming:</b> Golang, JavaScript, TypeScript, Python, SQL, Make, C#, Java, HTML/CSS <b>Frameworks:</b> React.js, Playwright, gorilla/mux, SciPy <b>Databases:</b> MySQL, Kafka, Prometheus, Redis, FoundationDB, BoltDB <b>Tools:</b> Linux, Git, Kubernetes, Docker, Ansible, Vault, Github, Graphana, Splunk, Nix</p>	
Experience	<b>Tesla, Inc.</b> <i>Staff Software Engineer</i>	Austin, TX December 2021 – Present
	<ul style="list-style-type: none"><li>• <b>Data Visualization:</b> 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.</li><li>• <b>Observability:</b> Implemented Open Telemetry tracing across several Golang applications communicating via gRPC and Kafka, greatly reducing fault analysis time.</li><li>• <b>Human Machine Interface:</b> 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.</li><li>• <b>API Design:</b> Created REST APIs using gorilla/mux to enable complex quality data interactions between industrial scanners, lineside systems, and MES systems.</li><li>• <b>Serial Protocols:</b> Connected Golang applications to production line test equipment communicating with custom serial protocols on TCP sockets.</li></ul>	
	<i>Staff Automation Engineer</i>	December 2019 – December 2021
	<i>Senior Automation Engineer</i>	April 2018 – December 2019
	<i>Automation Engineer</i>	May 2017 – April 2018
	<ul style="list-style-type: none"><li>• <b>Leadership:</b> 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.</li><li>• <b>Design Architect:</b> 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.</li><li>• <b>Abstraction:</b> Redesigned PLC MES libraries to make transaction implementations transparent to machine process implementations.</li><li>• <b>Management:</b> Mentored a team of 7 direct reports and conducted over 150 interviews.</li></ul>	
	<b>EZSoft, Inc.</b> <i>Automation Engineer</i>	Malvern, PA October 2012 – July 2015
	<ul style="list-style-type: none"><li>• <b>Data Acquisition:</b> Developed a C# application and GUI to integrate bespoke embedded devices into an industrial control system for sub-second RF process control.</li></ul>	
	<b>Chemical Engr. Dept., University of Pittsburgh</b> <i>Process Control Engineer Internship</i>	Pittsburgh, PA May 2011 – December 2011
Education	<b>Carnegie Mellon University</b> <i>Master of Science in Chemical Engineering. 4.0/4.0.</i>	Pittsburgh, PA December 2016
	<ul style="list-style-type: none"><li>• <b>Machine Learning:</b> 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 &gt;99%.</li></ul>	
	<b>University of Pittsburgh</b> <i>Bachelor of Science in Chemical Engineering. 3.3/4.0.</i> <i>Minor in Computer Science.</i>	Pittsburgh, PA April 2012