

# Joe Webster, Software Engineer

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## Experience

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**Creator & Software Engineer, Otto ([www.otto-etl.com](http://www.otto-etl.com)) - Remote** 2023

Otto is an open-source, web-based, and automated ETL pipeline tool that's capable of extracting 200K+ PostgreSQL database rows, transforming the data and loading the results into a target database

- Designed and built a user interface using React, React Flow and Material UI that allows users to create, modify and execute node-based workflows where each node contains ETL specific metadata
- Constructed a system that allows users to transform multiple sources of extracted data by submitting their own arbitrary custom JavaScript code to the backend using the CodeMirror code editor and Node.js VM
- Designed a recursive algorithm using JavaScript promises and memoization that enabled the execution of parallel tasks and increased a workflow's maximum nodes from 5 to 30+
- Developed a workflow execution scheduler using Node-Cron that automatically runs workflows at specific intervals and reschedules future executions in the event of a network fault or server restart
- Implemented real-time execution log streaming from the backend to the frontend via server-sent events which empowers users to diagnose workflow failures and bottlenecks
- Developed a Node.js/Express backend that orchestrates the scheduling, validation, execution, error handling, and monitoring of workflow nodes
- Containerized the application using Docker, eliminating the need to set up databases/environment variables and resulting in a 50% reduction in installation and configuration time
- Led agile standups, sprint planning sessions and weekly retrospectives for a four-person remote team
- Authored a case study on Otto's problem domain, architecture, challenges, and design decisions

**Front-End Developer, Alignable - Boston, MA** 2013 - 2014

- Implemented user-friendly UI using HTML, CSS, JavaScript and responsive design techniques
- Converted user onboarding flow from a fixed-width to responsive layout, increasing conversions by 15%
- Collaborated with Ruby on Rails back-end developers to ensure integration of front-end components

**Front-End Developer, GrabCAD - Boston, MA** 2012 - 2013

- Partnered with designers to translate mockups into pixel-perfect code using HTML, CSS and JavaScript
- Collaborated in Agile development processes, participating in daily stand-up meetings and sprint reviews

## Skills

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- **Languages:** JavaScript (ES6), TypeScript, Ruby, Go, SQL, HTML, CSS
- **Technologies:** React, Node.js, Express, PostgreSQL, MongoDB, Tailwind CSS, Jest, Bash, HTTP, REST
- **Other:** API design, Git, Github, Figma

## Education

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**Vanderbilt University - Nashville, TN**

- Bachelor of Arts in Political Science