

Tyler Frye

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PROFILE

I am a driven and passionate software engineer with experience building robust and scalable full-stack solutions. With a wide skill set, including problem-solving, team leadership, and design, I'm well equipped for both attention to detail as well as seeing the bigger picture to drive projects to succeed. Dog lover, home chef, and game designer.

PROFESSIONAL EXPERIENCE

Open Source Software Engineer, ZenML Apr 2024 – present

- Implemented commands to navigate directly to a specific ZenML stack or pipeline in the dashboard
- Improved user experience by adding intuitive interface elements to the ZenML VSCode Extension
- Enhanced inline commands for stack and pipeline views to include navigation to their respective URLs

Co-Creator/Software Engineer, Arbiter (arbiter-framework.com) Aug 2023 – present

- Engineered a **scalable** real-time video conferencing framework with **automated AWS Deployment of microservice architecture** to allow room-based conferencing features to be added to an existing application within minutes
- Designed and built a Selective Forwarding Unit for video conferencing that supports conferences of 15+ users per room
- Developed a highly concurrent serverless signaling architecture utilizing **AWS WebSocket API** Gateway in conjunction with AWS Lambda functions
- Built a CLI to automate the provisioning of AWS Cloud Infrastructure (ECS Clusters, WebSocket Gateway, HTTP API Gateway, IAM roles, etc.), **reducing a 50+ step workflow** to a single command
- Containerized server components via **Docker** and designed a mechanism to facilitate auto-scaling
- Implemented a **RESTful API** to manage backend interactions between the frontend application and AWS infrastructure, including the provisioning of new ECS containers to meet user demand
- Served as **lead designer** for the **Arbiter Frontend, ReactSDK, responsive** auto-scaling video grid, the Arbiter Landing Page, and all graphics that appear in the Arbiter Case Study (arbiter-framework.com/case-study [🔗](#))
- Utilized **agile** methodologies, daily **scrums**, and pair-programming framework for a remote team of 3 engineers to foster mentorship and **collaboration**, resulting in increased team-wide ownership of code and clarity on technical decisions

Software Engineer, Self-Employed Apr 2020 – Aug 2023

- aogeru - A full featured personal blogging application (**Python, Flask**, React, MUI, **PostgreSQL**)
- UNO - An online multiplayer version of the classic card game (PhaserJS, Node.js, Express, **TypeScript**, Socket.io, **React**)
- Dreamcatcher - A tool for collecting HTTP and Webhook requests and inspecting them in a human-friendly way (DO, Nginx, MongoDB, **Node.js**, Express, **React**)

Multiple roles including Manufacturing and Corporate Retail Operations Jun 2013 – Apr 2020

SKILLS

Languages and Frameworks

React, TypeScript, , C#, CSS, Python, HTML, Node.js, Express, Ruby, Jest, SQL

Cloud

AWS CDK, SDK, EC2, ECS, Lambda, API Gateway, S3, CloudFront, DynamoDB

Other Technologies

DOM, SOAP, REST, Tailwind, MUI, Figma, PostgreSQL, MongoDB, Redis, Docker

EDUCATION

Tennessee Technological University 2008 – 2012

Completed coursework in Computer Science including Object Oriented Programming, Data Structures and Algorithms, and Discrete Mathematics