

# Nicholas Funnell

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## Summary

A senior software engineer with 11 years of real world experience. I specialize in the development, deployment, operations, and support of web-based software systems. I am a full-stack developer and have experience working with senior, junior, remote, and in-person teams across time zones.

## Experience

November 2022 - December 2024

### **ClassDojo, Inc - San Francisco, CA - Staff Software Engineer**

- As a member of the Messaging team, worked to revamp the fundamental capabilities of the messaging product by building a robust API backend and UX on Web and Android (React Native). The Messaging system expanded to model multiple kinds of chat groups beyond the original 1-to-1 available in the original system.
- On the Growth team, designed and implemented a plethora of UX-focused A/B experiments to improve the onboarding experience for our Teacher and Parent personas. Daily collaboration with Product, Data, and Design teammates to iterate on experiments and drive increases in customer activity.
- Oncall for Team and Company level systems, leading incident response and postmortem analysis. Building and maintaining systems in Node.js, Typescript, and React.js

April 2021 - November 2022

### **Twilio, Inc - San Francisco, CA - Staff Software Engineer**

- Lead engineer on the project to rebuild the customer-facing console homepage. Project was designed to scale to many different customer personas at Twilio. Worked with the product team to define requirements, did the architecture designs, got review from peers, broke the project down into tasks, worked with about four other engineers on the team to implement it, and gradually rolled it out to customers successfully. I implemented the backend API parts in Scala with Akka-HTTP framework
- Lead engineer for adjusting our teams existing services to work in multiple AWS regions, launched in AU1 and IE1 datacenters
- Cross-team collaborated with the Fraud and Identity team on shared goals such as implementing a Password Enforcement API in the customer signup flow, reporting signup metrics to anti-fraud vendors, and adjusting the signup flow when any integrated backend-API changes happened.

- As part of developing & deploying a new Java 11 Dropwizard service, I led the design of the High Availability and Load Capacity planning for a service that was expected to handle about 15000 RPS in peak load.

February 2015 - April 2021

**Twilio, Inc - San Francisco, CA - Senior Software Engineer**

- Worked closely with Product Managers to build the Twilio Console homepage, enforce email verification at signup, and the new customer onboarding question-answer wizard.
- Lead, designed, and brought to production a two-year effort to completely remove PHP from the team's services, moving to a full Scala backend. This removed the team from a shared codebase and shared on-call responsibilities. Two internal PHP services with a custom framework got replaced with one Scala service using Akka-Http framework.
- Worked across teams to implement internal data APIs to enforce GDPR compliance.
- Implemented a frontend wizard page in the Console to enable customers to securely upload identity & business documents. This was part of a larger effort to comply with european telecom regulations
- Mentored more junior engineers on their design documents, deployment strategies, code structure, and more as part of the Twilio Hatch program.

December 2012 - February 2015

**Davis Instruments - Hayward, CA - Web Applications Engineer**

- Built a single page application for flagship vehicle fleet management product. Using the Backbone framework in Javascript, I created a web interface to view near real-time movement of vehicles around the world and display historical trips and events. Composed of various modules that communicated with an event bus.
- Built a service to calculate driver and vehicle related reports in Java. Replaced the old PHP system, reports executed 2 to 4 times faster. Service was designed to run as a fleet of many instances on different machines to scale up when needed, and used ActiveMQ to integrate with the rest of the system.
- Wrote a template-based system for sending emails to customers of Weather subscription service. Built a front end in PHP and Javascript for the marketing department to edit and preview templates. Replaced system that had all emails hard-coded into application.

## Education

Graduated June 2012

**California State University, East Bay - Bachelor of Science (B.S.), Computer Science**  
Hayward, CA

## Skill List

Typescript, Javascript, node.js, Python, Scala, PHP, Java, Koa, AkkaHttp, HTML, CSS, React, MySQL, Linux, Bash, Make, npm, pnpm, maven