Ryan Emberling

Software Engineer, Manager

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Work Experience

The ASSISTments Foundation   *Worcester, MA*

ASSISTments empowers math educators with adaptive, data-driven assessment tools so they can best help the students who need it most

Director of Engineering   *September 2021 - Present*

- Leads three teams totaling 15 software and QA engineers in development of robust ed-tech platform spanning 6 products

- Architects and leads the full-stack development of E-TRIALS, a revolutionary learning science platform for conducting large-scale randomized controlled trials, facilitating 18 research studies with over 500 participants each, built with Vue + Spring

- Designs and maintains the end-to-end testing automation framework and infrastructure used to test the full stack with Cypress in AWS CodePipeline, reducing manual testing by 50%

- Spec'd API, managed project, and spearheaded full stack development of Insights Hub, an interactive dashboard for school administrators to analyze district-level assessment data

Lead UX Engineer   *September 2020 - September 2021*

- Designed Pinia store architecture, initialization logic, stateful navigation, and other features for student assessment MVP

- Created and conducted sync + async Vue training sessions

UX Engineer   *September 2019 - September 2020*

- Created score reporting, search, and curricula curation pages for MVP rollout of teacher-facing SPA using Vue, Vuex, and Vuetify

- Built dashboard landing page for tutors to analyze student work

Open Source

Cuttle   *www.cuttle.cards*

Architects, develops, and manages contributions from over 75 contributors for open-source, full-stack, real-time web application, empowering users to play Cuttle, the most sophisticated standard-deck card game, against other players and the world's first Cuttle AI Tutor. Built with PostgreSQL, NodeJs, SailsJs, VueJs, and Vuetify. Tested e2e with Cypress.

- Built and launched MVP, founded community of players and open source contributors
- Annually participates in Hacktoberfest as maintainer, with 53 updates merged and deployed during October 2023
- Mentors devs across the stack to create progressively more complex contributions, tailored to their interests
- Manages large scale projects with many contributors e.g. internationalizing the application and upgrading to Vue 3

Tech Talks

Sensitivity, Precision, and When to Test in Prod   *CypressConf 2023*

Strategic discussion of automated testing architecture. Proposes a framework for analyzing the risks associated with the assumptions implicit in testing choices to architect testing systems that maximize organizational value.   *30 Minutes*

From Novice to Pro, My Journey with Sails.js   *SailsConf 2022*

Ode to side projects and self-learning. Explores how to align the value you get out of a side project with your career goals through targeted skill development and architectural decision making tailored to your context.   *45 Minutes*

Skills

Front-End Development

Semantic HTML, CSS, JS, Typescript, VueJs, Vuetify, Angular, React, i18n

Back-End Development

NodeJs, SailsJs, Java, Spring, Maven, PostgreSQL, MySQL, Redis, OOP

Testing

Cypress, Vitest, Jest, Mocha, JUnit, Mocha, Test-Driven Development

Operations

Git, Github, Github Actions, Bash, Powershell, Heroku, Vite, Cypress Cloud, AWS: EC2, RDS, CodeArtifact, CodePipeLine, Terraform

Education

Carnegie Mellon University

Pittsburgh, PA   August 2019

Masters in Educational Technology and Applied Learning Science

Trinity College

Hartford, CT   May 2013

BS in Mathematics and Philosophy Summa Cum Laude