

M. Paul Weeks

Full Stack Web Engineer / Game Designer / Web Dev Instructor & Mentor
New York City / Remote

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Highly skilled: Typescript, React, Python, HTML, CSS, SQL, noSQL

Experienced: Go, Rails, C#, Scala, Java, Kotlin, nginx, GCP, AWS, Firebase

WEB DEVELOPMENT

Tough Love Arena, New York, NY

2019 – present

Founder, software engineer, game designer, community manager

Co-creator of toughlovearena.com, a browser-based, indie fighting game with rollback netcode

- Responsible for all coding, game design, and community management
- Developed fullstack using Typescript, React, Express, PostgreSQL, and NoSQL
- Integrated with GCP Storage, Firebase, AWS EC2 / S3 / SES, Linode, and Cloudflare

Product Accomplishments

- Launched as a public beta in January 2021 after 15 months of part-time development
- Visited by 173k new users and 58k returning users in 2021 without spending anything on ads
- Featured on [Vice](https://www.vice.com) and has been featured in YouTube videos adding up to over 100k views
- Hosted developer update live streams every month on Twitch and collected regular feedback
 - You can find archives of the update streams on youtube.com/c/ToughLoveArena

Engineering Accomplishments

- Created an original 2D fighting game engine from scratch in Typescript and HTML5 canvas
- Designed a game loop that mitigates FPS issues caused by the HTML5 setTimeout() spec
- Implemented an original solution for P2P rollback netcode using WebRTC
- Prototyped matchmaking and lobbies quickly, utilizing Firebase's Realtime DB
- Migrated matchmaking from Firebase to Node servers, improving state management
- Designed an accessible menu system that can handle mouse, keyboard, gamepads, and touch
- Leveraged React for easy FE component re-use across menus and non-gameplay screens
- Wrote unit tests for core gameplay logic and “sim tests” for common gameplay scenarios
- Developed a CI/CD workflow using GitHub Actions to test and deploy quickly and easily
- Architected a serverless API for account management, authenticated using JWTs and OTPs

Open Source

github.com/toughlovearena

- Open sourced server code for matchmaking and WebRTC connection brokering
- Open sourced external pages for server status and community events
- Open sourced a multiplatform desktop version for offline/event play using Electron
- Open sourced scripts for creating an auto-updating “cabinet” version on a Raspberry PI

Google, New York, NY
Software Engineer

2019 – 2021

Google Drive

Full stack developer working on Drive Sharing, with an emphasis on enterprise (Java, Typescript)

- Developed end-to-end features for enterprise admins with controlled rollouts
- Refactored dynamic sharing text generation from the FE to the BE to dedupe client logic
- Expanded and documented the experiment framework for Drive's admin tools
- Assisted in a product-wide JavaScript to TypeScript migration

Waze

Android developer on Waze's flagship app (Java, C++, C)

- Created the first client unit tests, built unit testings tools, and documented best practices
- Collaborated with QA to integrate E2E tests and help them automate their workflow
- Solved difficult race condition caused by the initialization of the C++ native layer
- Organized cross-site meetings and documented options to fix a long standing security issue
- Investigated and fixed discrepancies in critical business metrics caused by legacy C code

NICKL, New York, NY
Software Engineer Part-time

2018 – 2019

Primarily frontend experience (React, FlowType)

- Created React-powered modal with responsive design to run as a paywall on client websites
- Designed a tool for customizing said paywall, with live preview and automatic redeploy
- Engineered a method for pseudo "cross domain cookies" to enable auth on client websites
- Implemented the related APIs and DB models on the BE using GraphQL and rethinkdb

Paperless Post, New York, NY
Software Engineer

2016 – 2018

Primarily backend experience (Go, Ruby on Rails)

- Added support to Rails models and admin tools for international currencies
- Designed and prototyped a Go service for scheduling internal tasks (email, notifications, etc)
- Took the lead in process standardization, from PR signoffs to naming conventions

Percolate, New York, NY
Backend Engineer

2014 – 2016

Primarily backend experience (Python, Django, Flask, SQLAlchemy)

- Created single sign-on integration, including full stack web app work and API for mobile
- Refactored and migrated user data from a monolithic codebase to a new service
- Led technical interviewing, producing new questions and documenting expected roadblocks

Zocdoc, New York, NY
Software Engineer

2012 – 2014

Full stack experience using .Net MVC (C#)

- Developed backend & frontend software to track and view business metrics
- Created internal scheduling web app for customer training with dynamic constraints support

INDEPENDENT PROJECTS of NOTE

FightingGame.Community, New York, NY

2016

Created web app that provided up-to-date *Street Fighter V* statistics for 24k registered users

- During peak activity, served 40k unique users and 274k page views per month
- Developed full stack on AWS using MySQL, Python3 + Bottle, HTML, CSS, JS
- Discovered and used Capcom's internal and undocumented "Fighters Network" API

TEACHING and MENTORING

MentorCruise, New York, NY

October 2021 – present

Mentor

mentorcruise.com/mentor/mpaulweeks

Helped other professional software engineers achieve their personal goals

Google Code Next, New York, NY

2019 – 2020

Coach

Taught an after school class for black and latinx teens about remaking retro games (e.g. Asteroids)

General Assembly, New York, NY

2018 – 2019

Instructor

Taught long-form classes and one-off workshops about frontend to adult professionals

Miami Ad School, Queens, NY

2017 – 2018

Instructor

Taught introductory frontend programming and tech literacy to non-technical adult professionals

EDUCATION

Colgate University, Hamilton, NY

2008 – 2012

Bachelor of Arts, Computer Science

- Upsilon Pi Epsilon – Computer Science Honors Society
- Magna Cum Laude

OTHER INTERESTS

- Pro bono web app dev for Animation Nights New York, an indie animation meetup
- Traveling and giving guest lectures at anime conventions about film history and analysis
- Barbershop singing