

AMY PHAN

Software Engineer · Frontend Lead · Product Designer & Engineer

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EXPERIENCE

Software Engineer / Frontend Platform Migration Lead · Paradigm Testing

Sept 2024 – Present

- Led end-to-end migration of the Knock Examination Platform from JSP/jQuery to React + Tailwind + Vite — targeting recapture of an estimated \$30–40K/month in third-party exam delivery and live proctoring costs across near-daily academic exam sessions of 30–40 students.
- Identified and resolved critical frontend bundle bloat — reduced tenant-portal initial JS from 1.86 MB to 94.6 KB gzip (99.7%) and admin-portal from 256 KB to 3.8 KB gzip (98.5%) via route-level code splitting, lazy-loading SunEditor and OpenTok, and CI bundle budgets; shipped across 41 commits in 5 phased subtasks.
- Owned the full UX redesign: information architecture, navigation system, and core workflows across the oral exam command center, written exam review, item bank, admin portal, and scheduling.
- Built the frontend component system from scratch — custom design tokens, custom primitives, and shared components with mode-prop patterns to eliminate duplication across examiner and candidate views.
- Designed and implemented a split admin/tenant permissions system as a hard security and audit boundary.
- Led a small team of junior-to-mid developers: scrums, work assignment, code review, React mentorship, and technical direction.
- Developed full Spring Boot features independently end-to-end — controller, service layer, repository, entity models, DTOs, and database migrations — without requiring backend support beyond code review.
- Owned production incident response — diagnosed issues via EC2 and Elasticsearch logs, resolved data integrity issues via live SQL, manually remediated failed exam recordings, and led platform-wide QA when formal coverage is insufficient.
- Provisioned the full AWS staging environment for GLADyS (enterprise SaaS) from scratch — ECR, IAM least-privilege roles, KMS asymmetric CMK, SSM Parameter Store secrets, VPC/security groups, ALB with HTTPS, ASG with Launch Template, and zero-downtime CI/CD via Bitbucket Pipelines with Instance Refresh (MinHealthyPercentage=100).

Freelance Product Designer & Software Engineer · GA TCG Sandbox · Remote

March 2025 – April 2026

- Led end-to-end product design for the GA TCG Sandbox — UI/UX system for the Unity game, design tokens, and visual assets adopted across both the game and public website.
- Solo-developed the React + TypeScript + Vite public info site, implementing a GCS-backed config system so non-developer teammates update content without touching code.
- Conducted post-launch user research via player surveys; analyzed feedback from an active player base of 15K+ Discord members and 1K+ players since April 2025.

FREELANCE PROJECTS

ICOC Admin Map Dashboard · Contract · Full-cycle delivery

2024

- Created a data visualization and administrative mapping tool. Solo delivery: requirements, design, development, and client handoff.

Frontend	React, TypeScript, JavaScript, Tailwind CSS, Vite, Webpack Module Federation, React Query, React Router, JSP, jQuery, HTML/CSS
Backend	Java Spring Boot, JPA/JPQL, REST APIs, OpenAPI, SQL, MariaDB, Flyway
Infrastructure	AWS (EC2, S3, RDS, ECS, CodeDeploy, SQS, ECR, ALB, ASG, KMS, SSM, IAM), Bitbucket Pipelines, Caddy, WSL2/Linux, Firebase
Design	UX/UI Design, Design Systems, Information Architecture, Figma, Motion Graphics, Typography
Practices	Component architecture, custom hooks, micro-frontend, AI-assisted development (Claude Code, Gemini), code review, technical mentorship, on-call support
Tools	Git (rebase, conventional commits, PR workflow), VS Code, Jira, Atlassian suite

EDUCATION

B.S. Computer Science / Software Development · University of Maryland, Baltimore County (UMBC)

2018 – 2022

B.A. Visual Arts: Graphic Design Concentration · University of Maryland, Baltimore County (UMBC)

2018 – 2022