

NATHANIEL W. BROOKS

SOFTWARE ENGINEER

natewbrooks.com
github.com/natewbrooks
natewbrooks@gmail.com

EXPERIENCE

GoPanda — Full Stack Engineer

NOV 2025 — PRESENT

Promoted from intern Jun 2026

- Ship production full-stack features on client web platforms across a React/TypeScript frontend and a Node/Express/Sequelize backend on PostgreSQL.
- Build real-time functionality over WebSockets with Redis pub/sub for horizontal scaling, plus Redis-backed job queues that move heavy work off the request path.
- Design internal admin tooling with server-side sorting and pagination, cached authorization checks, and live-updating operational views.
- Expand unit and containerized integration test coverage across both repositories, and review teammates' pull requests to keep releases stable.

Fortinet Federal — Product Management & Cloud Intern

JUN — AUG 2025

- Architected and built a policy-compliant full-stack automation platform for firewall configuration and isolated network provisioning.
- Implemented infrastructure-as-code with Terraform, backed by FastAPI services and a Svelte frontend.
- Led system design and UI/UX within federal compliance frameworks including FedRAMP, ZTNA, SASE, CMMC, and NIST.

Kite Technology Group — Security & Operations Intern

MAY 2024 — MAY 2025

- Monitored and responded to cybersecurity events in NOC operations.
- Supported security and compliance audits through training-campaign deployment and documentation.
- Administered Microsoft 365 environments using Azure, Intune, and Entra.

PROJECTS

Timesheet — Cross-platform time tracking with shared workspaces, threaded comments, and markdown notes.

Stateless Fastify/TypeScript API on PostgreSQL with Redis-backed job workers, one SvelteKit codebase shipping as PWA and native Tauri desktop app.

Spark — Real-time matchmaking with live user queues, session orchestration, and WebSocket messaging on a FastAPI and PostgreSQL backend with a React frontend.

Joust — Physics-based, pixel-styled jousting game in Three.js with custom GLSL/WebGL shaders, dynamic camera transitions, and real-time collision.

Caption Creators — Round-based multiplayer captioning game using AI-generated prompts and the YouTube API to serve videos, built with Next.js and MySQL.

GrubGuesser — SwiftUI game for guessing and comparing foods' nutritional values, built in MVVM with a FastAPI backend serving USDA FoodData Central data.

TECHNICAL SKILLS

Languages	TypeScript, JavaScript, Java, Python, Swift, SQL
Frontend	React, Svelte 5 / SvelteKit, Next.js, TailwindCSS, Three.js, SwiftUI
Backend	Node.js, Express, Fastify, FastAPI, WebSockets, Redis queues
Data & Infra	PostgreSQL, MySQL, Redis, Sequelize, Drizzle, AWS, Docker, Terraform, Tauri

EDUCATION

Towson University — B.S. in Computer Science

3.82 GPA