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Matthew Brown

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Education

University of Virginia, Bachelor's in Computer Science

Expected Graduation May 2027

- **Extracurriculars:** Software Game Development Club, Cracking the Interview Club
- **Coursework:** Computer Architecture, Data Structures & Algorithms, Discrete Mathematics, Linear Algebra, Probability & Statistics

Work Experience

Lead Engineer, Flathead Special Education Cooperative | *TypeScript, React, Python, AWS, Redux, Vite, SQLite*

Sept. 2025 — Present

- Launched a microservices-style React SPA on AWS Amplify & CloudFront with WCAG adherence to let program coordinators self-publish; cut content turnaround from 5 days to 3 hours by shipping AI-assisted admin workflows and a role-based content model.
- Built a guided UI with SQLite backend utilizing server-side validations and Amplify functions to have 95% spam form rejection, reduced global content availability time to under 60 seconds via automated CloudFront invalidations.
- Built a resilient CI/CD pipeline with HTTPS, auto-SSL, CDN, and least-privilege access control, deploying via Amplify Serverless for on-demand scalability, and low latency, dropping P1 incidents to zero.

Senior Frontend Engineer, A&S AI | *TypeScript, React, Python, AWS, Redux, Vite*

Mar. 2025 — Present

- Improved cross-device UX for customers and sales demos by translating Figma specs from UX design and sales teams into a responsive React component library, reducing UI implementation time from two weeks to 2-3 days for most modules.
- Supported feature rollout across 41 modules by partnering with stakeholders, backend engineers, and designers for a rapidly evolving product, this contributed to securing \$2M+ in early investor funding.
- Collaborated in weekly sprints with structured dev meetings and agile feedback loops, accelerating feature delivery and reducing bug turnaround time to 3-4 days with story-driven component testing.

Full Stack Software Engineer, Commence | *TypeScript, React, C#, Python, MongoDB, PostgreSQL, AWS, NodeJS*

Aug. 2022 — Jun. 2025

- Developed a Python full-stack document indexing tool leveraging computer vision and machine learning to automate the conversion of client physical records to digital, reducing the necessary processing time by over two hours per 1,000 documents.
- Developed administrative and database management tools, using React, OAuth, SSL, and TLS while leveraging SSR to streamline content for end users, minimizing load times, improving search on SQL databases, and eliminating security vulnerabilities on AWS.
- Refactored the entire codebase of a web application to extract both handwriting and typed text from standardized forms using Typescript, adding documentation and type safety to eliminate all frontend type errors in over 500 production files.

Game Development Instructor, iD Tech | *C++, Unreal Engine, C#, Unity, Lua, Roblox*

Apr. 2025 — Jun. 2025

- Delivered project-based curricula in coding and game development to students aged 7–17, teaching Python, Java, Unity VR, Unreal Engine, and Scratch in hands-on workshops.
- Raised student project completion rates by over 90% across diverse age groups by created customized lesson plans that bridged theory with practice and scaffolding goals with rubrics parents and director could follow at home leading to an additional \$5k in monthly sales.
- Mentored students on game design and programming fundamentals, sparking interest in STEM fields and inspiring multiple students to pursue advanced coding camps.

Gameplay Engineer Intern, The Verse | *C++, Blueprint, Unreal Engine*

Apr. 2025 — Jun. 2025

- Implemented core gameplay systems in C++, iterating on prototypes supporting immersive loops with unit/integration testing.
- Worked cross-functionally with designers, artists, and systems engineers; exposure to debugging tools and performance profiling to keep frame times stable

Projects

Personal Portfolio Website | *NextJS, Docker, SQLite, AWS Amplify, TypeScript, CSS*

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- Architected a full stack web portfolio with a stream-lined graphical interface cutting TTFB from 2.5s to 1.1s by combining SSR, and AWS Amplify's global CDN using NextJS and Typescript.
- Enabled instant site updates by containerizing a RESTful SQLite API in Docker and exposing CRUD endpoints through Amplify Functions and automated deployments secured by IAM least-privilege roles to drive a 40% engagement and 2x recruiter contact rate.
- Migrated web app to AWS Amplify Hosting and serverless compute, cutting hosting cost by 70% and achieving 99.9% availability across edge locations; architecture enabled handling traffic spikes during peak outreach campaigns with zero downtime.

Technical Skills

Languages: HTML5, JavaScript, TypeScript, CSS, C++, C#, Java, HLSL, SQL, Lua, SQL (PostgreSQL, SQLite)

Frameworks: .NET, React, NodeJS, NextJS, Unreal, Unity, Roblox, Vite

Tools: AWS, Docker, React, Redux, jQuery, NodeJS, Git, GitHub, Perforce, CI/CD, performance profiling, build/ content pipelines