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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

Project Lead Developer, Flathead Special Education Cooperative | *TypeScript, React, Python, AWS, Redux, Vite* **Sept. 2025 — Current**

- Orchestrated the launch of a scalable, microservices-style React SPA on AWS Amplify & CloudFront with AI-enhanced admin workflows empowering non-technical staff to self-manage content, eliminating developer dependencies and boosting operational agility.
- Engineered a modular backend architecture enabling content workflows for blogs, newsletters, and resources with near-zero deployment friction.
- Built a resilient CI/CD pipeline with HTTPS, auto-SSL, CDN, and least-privilege access control, deploying via Amplify Serverless for on-demand scalability, low latency, and self-healing infrastructure

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

Mar. 2025 — Current

- Partnered with stakeholders to design and implement core architecture using modern frameworks, enabling scalable and maintainable code for a rapidly evolving product.
- Translated high-fidelity UI/UX designs into responsive, accessible, and performant user interfaces, improving user experience across devices.
- Collaborated in weekly sprints with structured dev meetings and feedback loops, accelerating feature delivery and reducing bug turnaround time.
- Contributed to product development efforts that helped secure over \$2M in funding, validating technical execution and product vision to investors.

Full Stack Software Developer, 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.

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.
- Created customized lesson plans that bridged theory with practice, boosting student project completion rates by over 90% across diverse age groups.
- Mentored students on game design and programming fundamentals, sparking interest in STEM fields and inspiring multiple students to pursue advanced coding camps.

Projects

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

mushakushi.com

- Designed a NextJS frontend and backend with a stream-lined graphical interface and short loading times, highlighting features and contemplations about gameplay programming and development in various engines and languages.
- Leveraged Docker and a RESTful SQLite backend API to easily store and modify site content, removing the need to directly modify source code.
- Designed a scalable and secure cloud infrastructure on AWS Amplify, ensuring high availability and reliability for critical applications, while implementing cost-effective strategies through serverless computing code optimization.

UI Toolkit Menu Framework | *Unity, C#*

github.com/mushakushi/ui-toolkit-menu-framework

- Designed and implemented menu extensions that enabled dynamic UI behavior, including input handling, automatic focus management, and global settings, leading to improved user experience and customization across projects.
- Utilized Unity's Input System to integrate responsive and context-aware menu navigation, enhancing player interaction and reducing menu-related bugs, optimizing the framework for reusability through scriptable objects and UXML document references.

Technical Skills

Languages: HTML5, JavaScript, TypeScript, CSS, C++, C#, Java, HLSL, SQL, Lua

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

Tools: AWS, Docker, React, Redux, jQuery, NodeJS, Git, GitHub, Perforce