

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

Work Experience

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

Mar. 2025 — Present

- Developed a modular workflow-builder for an agentic AI platform, translating backend generative AI capabilities into a scalable, human-in-the-loop product experience for designing, running, and validating structured workflows across tables and files.
- Architected and scaled reusable React component library that standardized frontend patterns across 40+ product modules, accelerating rollout of critical workflows for a rapidly evolving AI SaaS product with story-driven and automated component testing.
- Partnered with design, sales, backend, and product stakeholders and teams to in agile feedback loops rapidly convert evolving business requirements into polished customer-facing experiences, shipping deployed features that raised \$200K+ in funding.

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

Sept. 2025 — Feb. 2026

- 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.

Full Stack Software Intern, 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 resolved known security weaknesses.
- 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 Engineer Intern, 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, in multiple languages 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.

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 and QA.
- Tested gameplay performance using debugging tools and performance profiling to keep frame times stable

Projects

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

mushakushi.com

- 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.

Real-Time Audio Rhythm Game | *TypeScript, React, Redux Toolkit, PixiJS, Web Audio API, Chrome Extensions, Electron*

mushakushi.com

- Architected a shared cross-platform rhythm-game engine that transformed live or uploaded audio into playable 6-lane charts, with platform wrappers for web and Chrome extension support.
- Implemented low-latency audio analysis and lookahead-based note generation using onset/beat detection, phrase templates, delayed playback scheduling, and calibration logic to keep gameplay synchronized under real-time input.
- Built a custom gameplay runtime and tooling stack with PixiJS and Redux Toolkit, including scoring, timing judgments, stats reporting, pattern debugging, and serialized chart/pattern models to support future editor workflows.

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