

# Tyler Hand

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LinkedIn: <https://linkedin.com/in/tyler-hand1/>

GitHub: <https://github.com/tylerhand1>

Portfolio: <https://tylerhand.dev/>

## Skills

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- o **Frontend:** React (Next.js), TypeScript, Tailwind CSS, Zustand, Tanstack Query, jQuery
- o **Backend:** C# (.NET Core), ASP.NET Core WebAPI, Node.js, Express, Hono, Zod, Socket.IO
- o **Database:** PostgreSQL (Entity Framework Core, Drizzle), Redis, Dexie.js, Loro CRDT
- o **Cloud/DevOps:** Azure, AWS (EC2/ECS/S3), Cloudflare, Docker, CI/CD, Turborepo
- o **Testing:** xUnit, Vitest, Test Driven Development

## Work Experience

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### Dents by Hand, Software Engineer

June 2023 – Present

- o Developing a scalable monorepo (React, Hono, Drizzle) to digitize client intake processes, translating complex business requirements into a high-performance automated system
- o Implementing type-safe API contracts with Zod and Hono RPC to ensure 100% data integrity; eliminated runtime form errors through rigorous validation between the frontend and backend
- o Architecting a high-performance UI/UX using Shadcn/UI, developing edge-native services with Hono and Wrangler to ensure near-zero cold starts and low-latency delivery

### BioFrontiers Institute, Virtual Labs Developer [GitHub](#) | [Demo](#)

May 2024 – August 2024

- o Engineered a modular simulation framework using Godot to digitize biology experiments, translating complex academic requirements into interactive, student-facing software features
- o Developed an automated validation and real-time logging system to provide immediate feedback to users, improving student learning outcomes
- o Collaborated in a cross-functional Agile team, actively participating in weekly sprints and code reviews to ensure on-time delivery of stable, version-controlled releases

## Projects

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### Lexinari

January 2026 – Present

- o Developed a local-first language immersion system using React, Dexie.js, and Loro CRDT to enable zero-latency UI and 100% offline persistence
- o Engineered a data enrichment workflow that cross-references user entries with an external linguistic database to automatically provide contextual metadata and reference sentences
- o Prototyped an OCR pipeline with Azure Functions (.NET) and Azure AI Vision for automated content ingestion

### Chat App [Demo](#)

September 2025 – December 2025

- o Built a real-time messaging platform using React, Express, and WebSockets, leveraging Redis for session management and PostgreSQL for persistent storage
- o Architected a Dockerized CI/CD pipeline via GitHub Actions for automated deployment to AWS, maintaining high reliability with end-to-end and integration testing (Vitest, Playwright)

### Language Learning App

August 2024 – July 2025

- o Developed a full-stack TypeScript/React immersion platform with PostgreSQL, implementing fuzzy string searching to improve UX for user-generated content
- o Achieved 90%+ API test coverage via TDD (Jest/SuperTest), ensuring high reliability during rapid feature iteration

## Education

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### University of Colorado

Bachelor of Science in Computer Science

Boulder, Colorado

May 2024