Erik Hein

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EDUCATION

San José State University   **May 2025**
Bachelor of Science, Computer Science   *San José, CA*

- **Courses**: Data Structures and Algorithms, Object-Oriented Design, Database Management System, Information Security, Machine Learning, Computer Vision, Mobile Device Development, Software Engineering, Programming Paradigms

WORK EXPERIENCE

IDitor Inc.   **May 2024 – Present**
Software Development Engineer   San Francisco*, CA*

- Architect an AI-powered social media app using **Flutter, Riverpod (for state management), and SQLite (for offline support),** enabling real-time sync and reducing interaction latency by **35%** for 100+ beta users.
- Implement interactive 3D-like UI components applying Physics engines, resulting in boosted average session time by **20%**.
- Construct **modular, reusable Flutter widgets** and animated UI elements to revamp responsiveness and visual consistency, setting the UI apart from competitors in the market.

Bridge Burma   **Aug 2023 – Nov 2024**
Full-Stack Software Engineer & UI/UX Designer   *Remote*

- Built a **proofreading submission platform** using **Next.js and Supabase**, serving 100+ international students, streamlining review workflows and decreasing processing time by **40%**.
- Designed intuitive UI/UX with **Figma**, contributing to **95%** positive feedback for usability and aesthetics.
- Collaborated in developing real-time submission and feedback flows, automating user interactions, and improving efficiency by **30%**.

PROJECTS

Jade.AI: Cursor for Data Analysis - (Devpost Link)   **Oct 2025**

- Led full-stack development of **Jade.AI**, an all-in-one AI platform that lets users clean, analyze, and visualize complex datasets using natural language commands, streamlining end-to-end data workflows without any coding or tool-switching.
- Built at CalHacks 12.0 (36-hour hackathon) and awarded **"Best Use of Groq"** for achieving lightning-fast conversational data analysis, leveraging **Groq API** to deliver responses up to **5x faster** than traditional LLM pipelines.
- Architected a robust, scalable full-stack solution using **NextJS, FastAPI, Pandas** and **Python**, integrating **Chart.js** and **AG Grid** for interactive visualizations and optimizing data state management to enable real-time analytics within seamless chat interface.

Trekteria: AI-Powered Outdoor Planning App - (https://www.trekteria.com/)   **Feb 2024 - Present**

- Led full-stack development of a **React Native/Expo** cross-platform mobile app, integrating AI trail recommendation and real-time weather tracking via OpenWeather API, while maintaining a modern and responsive UI.
- Engineered an offline-first architecture using **Supabase** for cloud sync and **SQLite** for local storage, ensuring seamless user experience across network conditions.
- Developed sustainability-focused features such as AI-generated trail suggestions, eco-friendly packing list, and gamified eco-missions, boosting user engagement by **30%**.

Gita: Video-to-Music Generator - (Devpost Link)   **June 2025**

- Developed GITA, a **full-stack AI music generation** app using **React, FastAPI,** and **Python** that analyzes video content via **Groq** Vision and generates background music using **Google's Lyria API**, all built in 24 hours.
- Designed a multi-agent architecture using **Google's ADK** with dedicated agents for video analysis, prompt generations, and music synthesis, automating the video-to-music pipeline.

Zen Board: AI Scheduler - (https://zenboardai.vercel.app/)   **Sep 2024**

- Deployed a full-stack smart scheduling tool with AI-driven task optimization, leveraging **Next.js** and **Supabase** to deliver personalized, real-time schedule generation for improved focus.
- Integrated a **generative AI** for automated schedule optimization, revamping daily task efficiency by **50%**.

SKILLS

- **Languages**: JavaScript, TypeScript, SQL, Java, C++, Python, Dart
- **Frontend**: Flutter, Expo, React Native, React, Next.js, HTML, CSS, Tailwind, JavaFX, Framer Motion, Bootstrap
- **Backend & Database**: Node.js, FastAPI, Flask, Supabase, Firebase, SQLite, Prisma, PostgreSQL, MySQL, MongoDB
- **AI/ML**: TensorFlow, Scikit-learn, Google's ADK, Groq, Lyria API, Gemma3
- **Design & Tools**: Figma, Adobe XD, Rive, Git, Docker, Google's Cloud Platform, Arduino, Matter.js