

Alex Straight

Software Engineer

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Education

Bachelor of Science in Computer Science

San Diego State Univeristy, San Diego |
August 2021 - May 2025

Major GPA: 4.0

Research Assistant: Assisted in optimizing non-orthogonal multiple access (NOMA) with intelligent reflecting surfaces (IRSs) using the Broyden–Fletcher–Goldfarb–Shanno (BFGS) algorithm to enhance signal data rates by manipulating thetas.

STEM Pathways Scholar: 1 of 11 students to be selected to present my research at SACNAS.

Key Skills

- TypeScript
- React
- Next.js
- Go
- CSS
- HTML

Talented web developer passionate about combining creativity and engineering principles to create efficient web applications. Skilled in React and Next.js, I've developed projects such as a pathfinding visualizer, a pictionary app using Go for WebSocket communication, and more. Dedicated to solving complex problems creatively and staying updated with industry trends to make a meaningful impact.

Professional Experience

Teachers Assistant

San Diego State University, San Diego, California | May 2024 - Present

- Teachers assistant for data structures and algorithms course at SDSU.

Front End Engineer Contract

San Diego State Univeristy, San Diego, California | May 2024 - July 2024

- Utilizing Next.js 14 for server-side rendering and static site generation.
- Authentication with auth.js.
- Implemented backend with Prisma and Neon.tech.

Front End Engineer Intern

Academic Assist, San Diego, California | March 2024 - July 2024

- Used Next.js 14, TypeScript, React, Tailwind CSS, Framer Motion and Shadcn UI.
- Worked with UI designer to rebuild landing page to deliver a more modern and educational feel.

Projects

Pathfinding Visualizer

- **Features:** Visualizes pathfinding algorithms, built with React and Next.js, TypeScript for code reliability, interactive user experience.
- **Usage:** Utilized in a Data Structures and Algorithms course at San Diego State University.
- **Link:** algo-visualizer-nine.vercel.app

Pictionary With Friends (still in development)

- **Features:** Full interactive canvas that renders free-hand drawing, and shapes that all users can see in real time. Go for WebSocket communication, Fabric.js for the drawing experience, and framer motion for animations.
- **In Progress:** Implementing leaderboards to track player stats using a combination of serverless functions with Next.js and cron jobs with Go.
- **Link:** pictionary-tan.vercel.app