

# Armin Suraj

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## EDUCATION

### University of California, San Diego

Bachelor of Science in Computer Science (Major GPA- 3.92 Provost's Honors)

San Diego, CA

Class of 2023

## TECHNICAL SKILLS

Amazon AWS Solutions Architect Certification

**Languages:** Rust, C/C++, Python, Javascript/Typescript, C#, Java

**Frameworks and Databases:** Svelte, React.js, Next.js, React Native, PostgreSQL, LibSQL, Express.js, pandas, pytorch

**Tools:** AWS, CUDA, Figma, Vercel, Cloudflare, Docker, Huggingface, Unity, Godot

## EXPERIENCE

### UCSD Design Lab

Aug 2023 – Aug 2024

Software Engineer

San Diego, CA

- Led a team of developers to create a social network platform to share stories about homelessness in San Diego
- Architected the backend using **PostgreSQL** and **OpenAI's Whisper and GPT models** to handle moderation and sentiment analysis
- Created a **custom reverse proxy** and **Svelte adapter** to serve through UCSD's private servers

### Sticker

Nov 2022 – May 2023

Cofounder

Los Angeles, CA

- Offered \$25K investment at **\$1M valuation** through angel investor **Jason Calacanis**
- Led the development of the social habit tracking app using **React Native** and **Postgres**
- Architected the social network backend in **PostgreSQL** using **Prisma**

### Invata

Jun 2022 – Aug 2023

Software Engineer Intern

Seattle, WA

- Designed and developed a content management system for courses on the platform
- Improved site responsiveness by **42%** through **Next.js** and caching optimizations
- Engaged in conversations with VC firms along with senior leadership during funding rounds

### DataHinge

Oct 2020 – Feb 2021

Software Engineer Intern

San Diego, CA

- Architected the Optical Character Recognition (OCR) pipeline to interface with **AWS** and backend API
- Improved document OCR speed by **78.2%** by creating a custom fork of **Tesseract** to use multithreaded processes
- Implemented the backend database schema on **MongoDB** and interfaced it with the REST API using **Express.js**

## TECHNICAL PROJECTS

### NightOwl | Typescript

[armn.link/nightowl](https://armn.link/nightowl)

- A fast, lightweight and privacy-first **web analytics alternative** to Google Analytics

### NES | Rust, C++

[armn.link/NES](https://armn.link/NES)

- **Emulation** of the 6502 CPU and 2C02 PPU and its registers to create an emulation of the NES console able to play native ROMs of the classic games

### SuperSlowMo | Python, Pytorch

[armn.link/SuperSlowMo](https://armn.link/SuperSlowMo)

- Recreation of **Immediate Frames Video Interpolation** by Jiang Et al. to create higher FPS slow motion video

### Habit | Svelte, PostgreSQL

[armn.link/habit](https://armn.link/habit)

- A daily habit tracking social network powered by social accountability

### ChartDuels | Svelte, Python, PostgreSQL

[armn.link/ChartDuels](https://armn.link/ChartDuels)

- A web-based game of Higher or Lower based on Spotify song charts that peaked at **528 weekly active users**

### StageManager | Typescript, Svelte

[armn.link/StageManager](https://armn.link/StageManager)

- A remote network based stage management system in use by **TEDxUCSD** using web sockets to facilitate server-client communication

### RayTracer | C++, OpenGL

[armn.link/RayTracer](https://armn.link/RayTracer)

- Explored **Monte-Carlo path tracing** to create global illumination on a specified scene graph, using multi-sampling techniques with a weighted cosine hemisphere for anti-aliasing and diffuse bounce approximation

### Seefood | Svelte Typescript

[armn.link/seefood](https://armn.link/seefood)

- A **GPT-4** powered webapp that uses vision and object recognition to estimate meal calories and macro breakdowns

### SportsBar | Swift

[armn.link/SportsBar](https://armn.link/SportsBar)

- A MacOS menu bar app that tracks NBA and NFL scores