

# MAX FU

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## EDUCATION

### University of California, Merced

Aug 2023 – May 2027

*Bachelor of Science in Computer Science and Engineering*

*Merced, CA*

**GPA:** 3.6 | **Awards:** 4x Dean's List, 2x Chancellor's List | **Relevant Coursework:** Data Structures, Algorithms, Computer Organization & Assembly, Advanced Programming, Discrete Mathematics, Linear Analysis, Linear Algebra, Vector Calculus, Probability & Statistics

## WORK EXPERIENCE

### Software Engineer Intern

May 2025 – Aug 2025

*Machyna, Inc.*

*San Diego, CA*

- Reduced file upload and retrieval errors by **20%** by implementing a serverless file-management solution on **AWS**
- Decreased deployment time and downtime releases by **75%** through **CI/CD** automation using **Terraform (IaC)**
- Redesigned and implemented a responsive landing page using **React**, **Next.js**, **TypeScript**, and **Tailwind CSS**
- Constructed an **AWS** cloud solution utilizing services such as **AppSync**, **Lambda**, **S3**, **Aurora**, and **IoT Core**

### Undergraduate Teaching Assistant

Aug 2024 – Dec 2024

*Electrical Engineering Programming - Prof. Ayush Pandey*

*Merced, CA*

- Facilitated lectures for **150** students by demonstrating Python and MIPS Assembly on open-circuit programming
- Lectured for **65** hours over **15+** weeks, addressing questions related to circuit design and programming
- Increased lab participation by **20%** through creating engaging and interactive coding exercises

### Undergraduate Research Assistant

Oct 2023 – Oct 2024

*LLM-based Autograder - Prof. Ayush Pandey*

*Merced, CA*

- Developed an autograder that increased average scores by **15%** providing enhanced grading and feedback response
- Reduced compute within each epoch by **15%** by implementing **LoRA**, a parameter-efficient fine-tuning technique
- Improved autograder's efficiency by **50%** through model fine-tuning using a custom JSON data pipeline

### ACM AI Lead

Dec 2023 – May 2024

*Association of Computing Machinery*

*Merced, CA*

- Organized and taught bi-weekly workshops to **50** active club members on **Deep Learning** and **Machine Learning**
- Hosted Deep Learning workshops on creating **MLP**, **Attention Heads**, and a simple **Language Model** from scratch

## PROJECTS

**Yagmi** | TypeScript, Next.js, React, PostgreSQL, Express.js, TailwindCSS, Drizzle ORM

- Built a subscription-based **SaaS** web app for creating personalized and context-aware AI mentors
- In 24 hours launching on Fizz, **250+** students signed up, got tailored career and learning guidance
- Designed and implemented a typed **REST API** with **Express** and **Drizzle ORM** over **PostgreSQL**, modeling users, mentors, chats, and messages to support long-lived mentor sessions

**Obscuri** | React, TypeScript, Rust, Tauri, Tailwind CSS, HTML

- Developed a **full-stack** desktop app providing an infrastructure to make queries without any noise or trace
- Launched on X and Reddit, attracting **500+** unique visitors within **24 hours** with **50** active users
- Eliminated query errors by **100%** through implementing OCR-powered screenshot parsing through OpenAI API

**Machyna** | Next.js, React, TypeScript, Tailwind CSS, Figma

- Decreased bounce rate by **25%** and increased engagement by improving UI/UX with a modern responsive layout
- Optimized performance and user experience, achieving **40%** faster load times using modular components and SSR
- Redesigned website using **Next.js**, **React**, **TypeScript**, and **Tailwind CSS**, establishing a stronger media presence

## TECHNICAL SKILLS

**Languages:** TypeScript, JavaScript, Python, Java, C++, C, HTML, CSS, GraphQL, SQL, NoSQL, MIPS Assembly

**Frameworks:** React, Next.js, Tauri, Express, Hono, Tailwind CSS

**Cloud Services:** AWS (AppSync, Lambda, S3, EC2, Aurora, RDS, VPC, IAM, DynamoDB, IoT Core, CloudWatch)

**Machine Learning:** PyTorch, TensorFlow, Pandas, NumPy, Matplotlib, Seaborn, scikit-learn, Hugging Face

**Developer Tools:** Git, GitHub, Gitea, Docker, Terragrunt, Terraform, Redis, TMUX, NGINX, AWS SDK, OpenAI SDK

**Concepts:** Software Engineering, Object-Oriented Design, Databases, Agile, Full Stack, Open Source, Frontend, Backend, Web Development, Version Control, Unit Testing, Build Automation, SQL, NoSQL, HTTP, TCP/IP, UDP, REST API, Proxies