MAX FU

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EDUCATION

University of California, Merced — Merced, CA
Bachelor of Science in Computer Science and Engineering — *Aug 2023 - May 2027*
Relevant Coursework: Discrete Mathematics, Multivariate Calculus, Linear Algebra, Linear Analysis, Probability & Statistics, Advance Programming, Data Structures, Algorithm Design & Analysis, Computer Organization & Assembly

WORK EXPERIENCE

Software Engineer Intern — May 2025 – Aug 2025
Machyna, Inc. — *San Diego, CA*
- Developed and deployed a file management feature on **AWS**, enabling secure end-to-end file lifecycle operations
- Implemented IaC with Terraform, ensuring **CI/CD** workflows, decreasing deployment time and downtime releases
- Redesigned and implemented a responsive landing page using **Next.js, TypeScript,** and **Tailwind CSS**

Undergraduate Teaching Assistant — Aug 2024 – Dec 2024
EE021 - Electrical Engineering with Python - (Prof. Ayush Pandey) — *Merced, CA*
- Facilitate lectures for **150** students by demonstrating Python and MIPS Assembly on open-circuit programming
- Lectured for **65+** hours over **15+** weeks by addressing questions related to circuit design and programming
- Enhanced student engagement by creating interactive coding exercises, increasing lab participation by **20%**

Undergraduate Research Assistant — Oct 2023 – Oct 2024
LLM-based Autograder - (Prof. Ayush Pandey) — *Merced, CA*
- Autograder improved **150** students' grades by **15%** for EE021 course by providing detailed grading and feedback
- **15%** less compute within the each epoch when fine-tuning by implementing LoRA on LLM-based Autograder
- Increasing the efficiency by **50%** when fine-tuning the Autograder through creating a CSV & JSON data pipeline

PROJECTS

Obscuri - (Productivity Tool) | *TypeScript, Tailwind CSS, HTML, React, Rust, PostgreSQL, DrizzleORM, Tauri*
- Developed a end-to-end desktop app providing an undetectable layer for stealth screenshots and queries
- Implemented a paid subscription system spanning a Obscuri, Vercel, Supabase, and the Stripe SDK
- Launched on X and Reddit, attracting **500+** unique visitors within **24 hours**

Machyna - (Web App) | *Next.js, TypeScript, Tailwind CSS*
- Redesigned company website using **Figma** for planning **Next.js**, **TypeScript**, and **Tailwind CSS** for implementation
- Improved UI/UX with a modern responsive layout, decreasing bounce rate by **25%** and increasing engagement
- Streamlined performance and developer experience with reusable components and SSR, reducing load time by **40%**

Bcon - (Byte Conversion CLI Tool) | *C , CMAKE*
- Decrease in processing time by **50%** compared to manual methods when handling large numerical conversions
- Reduced manual calculation errors by **90%**, implementing flag-based commands, facilitating efficient conversions
- Enhancing data interpretation efficiency by developing a **CLI tool**, enabling developers to convert data between binary, hexadecimal, and decimal formats

TECHNICAL SKILLS

Languages: MIPS Assembly, C, C++, Python, Typescript, Javascript, HTML, CSS, Rust, Go, Java, SQL
Frameworks: React, Next.js, Tauri, Express, Hono, Tailwind CSS.
Machine Learning: PyTorch, TensorFlow, Pandas, NumPy, Matplotlib, Seaborn, scikit-learn, HuggingFace
Developer Tools: Git, GitHub, Gitea, Docker, Terragrunt, Terraform, Redis, TMUX, NGINX, AWS SDK, OpenAI SDK
Cloud Service: AWS (AppSync, Lambda, S3, EC2, Aurora, RDS, VPC, IAM, Cognito, CloudWatch), Terraform, Terragrunt
Concepts: HTTP, TCP/IP, UDP, DNS, API Design, Caching, CDNs, Proxies, Load Balancing, Consistent Hashing, Replication & Sharding, Object Storage, Map Reduce