Ari Manjikian

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Education

Georgia Institute of Technology Atlanta, GA

Bachelor of Science in Electrical Engineering and Applied Physics- 4.0 GPA *May 2028*

Technical Skills

Languages: JavaScript (ES6+), TypeScript, Python, Dart/Flutter, C++, HMTL/CSS
Databases: PostgreSQL, MongoDB, Firebase Realtime Database, MySQL, Prisma, Supabase
Hardware Design: Verilog, VHDL, ASIC Design, VLSI technology, Static Timing Analysis
Developer Tools: Git, Docker, Google Cloud Platform, AWS(S3, EC2), MATLAB
Specialized Skills: RESTful API development, Machine Learning (NLP, Pytorch), Blockchain (Solidity), SEO

Experience

Full-Stack Engineer Oct 2024 – Present

ZCreations Jewelry LLC *Venice, FL*

- Achieved over 2,600 monthly impressions through targeted SEO strategies, boosting local search visibility and engagement, resulting in over 700 phone calls, 1200 website visits, 470 requests for directions.
- Designed and achieved a business management system that included invoice tracking, inventory and customer record management, email workflows and estimate generation, increasing customer satisfaction by 43%.
- Built and deployed the entire platform using modern technologies, including Python, React, TypeScript, JavaScript, AWS S3, and PostgreSQL, to securely manage over 500 inventory items and over 250 customer records.

Python Developer June 2024 – Sep 2024

Restaurant Chain *Remote*

- Constructed an advertisement hardware system to display synchronized media content on LCD screens, utilizing Raspberry Pi, Python, Docker and MQTT protocol for real-time updates over 20 devices.
- Engineered a dashboard enabling media uploads and device management with AWS S3 and PostgreSQL.
- Architected the hardware and software system to support centralized control of devices.

Software Developer Intern Jun 2023 – Sep 2023

Armenian Relief and Development Association *Pasadena, CA*

- Developed 'a donation-tracking dashboard for donors to monitor annual contributions exceeding $1,000,000, implementing user authentication, SQL database, and email notifications to handle over 1,100 donations.
- Communicated and collaborated with design professionals, focusing on user experience and interface.

Projects

Digital Design Engineer @ SiliconJackets | *SystemVerilog, SimVision, Innovus, Verdi* Aug 2025 – Nov 2025

- Designed and implemented a single-cycle RISC-V core using two SRAM macros with full RV32I support, including custom Control and Status Register (CSR) logic for Tapeout.
- Built and maintained a SystemVerilog test suite and validated functionality with SimVision and Verdi, achieving 99.8% code coverage and resolving critical decode, memory, and control-path edge cases.
- Collaborated with the physical design team to refine floorplanning decisions and verify clocking and reset strategies prior to final layout.

RISC-V Single-Cycle CPU Core | *SystemVerilog, cocotb, Verilator* Nov 2025

- Designed and implemented a single-cycle RISC-V processor core supporting the full RV32I instruction set, including ALU ops, branching, and memory access.
- Built a cocotb verification framework and ran comprehensive instruction-level testing in Verilator, reaching 99.4% code coverage and uncovering multiple decode and control-logic edge cases.

SaaS — Sentence Clustering | *Python, JavaScript, NLP, OpenAI, TensorFlow* Mar 2024 – May 2024

- Developed sentence-clustering pipeline using OpenAI embeddings and the TensorFlow Universal Sentence Encoder, achieving 100% cost savings by transitioning fully to open-source models.
- Clustered 5,000+ sentences using algorithms such as K-means, DBSCAN, and HAC, improving accuracy by 15% via elbow-method tuning and iterative experimentation.
- Integrated clustering functionality into a React SaaS platform that helps content creators organize and structure Q&A sessions.