Shant Manoukian

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Education

University of Michigan Ann Arbor, MI

Bachelor of Science in Engineering, Computer Engineering *Aug. 2023 – May 2027*

- Relevant Coursework: Data Structures and Algorithms, Embedded Systems, Computer Organization, Logic Design, Calculus I-III, Electronic Circuits, Systems and Signals
- Professional Involvement: KTP Professional Technology Fraternity, Armenian Students' Cultural Association

Employment

TalentNeuron, Software Engineering Intern June 2025 – Aug. 2025

Remote

- Built a modular Python pipeline to assess TalentNeuron's skill extraction algorithm against ChatGPT across 4,000+ job postings, adding an additional 1000+ new terms to the database to improve skill extraction.
- Architected a batch-based OpenAI workflow that partitioned and submitted descriptions via the Batch API, standardized outputs, and consolidated structured data automatically.
- Integrated fuzzy string matching and REST API queries to cross-verify skills, applying Levenshtein distance metrics and autocomplete-based enrichment from internal TN services.
- Added caching, retry, and exponential backoff mechanisms for efficient processing and fault resilience across thousands of API interactions.
- Produced detailed CSV reports and analytical dashboards quantifying exact, fuzzy, and semantic matches; presented findings and optimization insights to the Executive Team.

The Michigan Daily, Web Developer Feb. 2025 – Present

Ann Arbor, MI

- Maintain and enhance web applications for The Michigan Daily, including platforms for special editions and internal newsroom utilities, employing modern web frameworks.
- Apply React.js, Svelte, SCSS, and Parcel to craft dynamic front-end experiences. Work with React Native for mobile implementation.
- Partner with editorial, design, and business divisions to meet technical needs and suggest new initiatives enhancing The Daily's online presence.

KTP, App Developer July. 2025 – August. 2025

Ann Arbor, MI

- Contributed to the creation of KTP Life, a web app for scheduling coffee chats, tracking brother points, and managing events used by 100+ members of a professional technology fraternity.
- Engineered the front end with React.js, styling components via Material UI to deliver a responsive and intuitive interface.
- Collaborated with a UX designer in Figma to prototype a "KTP Superlatives" feature.

Relevant Projects

Stock Market Simulator Oct. 2024

- Devised an electronic stock exchange simulation in C++ leveraging priority queues and heaps to process and match buy/sell orders efficiently based on trader intent, price, and timestamps.
- Formulated algorithms to handle multiple input modes (trade list and pseudorandom), processing orders with median price calculation, trading logs, and participant summaries.

Four-Function Calculator on DE2-115 FPGA Nov. 2024 - Dec. 2024

- Constructed a four-function calculator on the DE2-115 FPGA board, applying RTL design concepts and Verilog to perform addition, subtraction, multiplication, and division of 11-bit two's complement integers.
- Composed datapath and control logic modules, integrating adders/subtractors, multiplexers, and registers to ensure accurate computation. Utilized ModelSim for verification and debugging.

Discord Chat Retriever Bot Jan. 2025

- Programmed a Discord bot using **discord.py** and asynchronous commands to fetch, embed, and randomize messages and images from server channels.
- Established persistent uptime hosting through a Flask-based keep-alive server and secure token handling with **dotenv**.
- Applied Python libraries (**asyncio, numpy, bisect**) for randomized message sampling, achieving responsive retrieval for 10k+ messages.

Skills

Programming Languages: C++, Python, Java, C#, HTML, JavaScript
Frameworks and Tools: React, BeautifulSoup, OpenAI API, Power BI
Version Control and Productivity: Git, Microsoft Office, Google Workspace
Simulation and Hardware Utilities: Verilog, ModelSim
Data and Query Utilities: SQL, REST APIs, Pandas