

# ARYAN SHELKE

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 [LinkedIn](#) |  [GitHub](#) |  [Portfolio](#)

## EDUCATION

### SAN JOSE STATE UNIVERSITY

Master of Science in Software Engineering (Specialization in Data Science)

Jan 2025 - June 2027 (Expected)

### UNIVERSITY OF CALIFORNIA, DAVIS

Bachelor of Science in Computer Science

Relevant Coursework: Data Structures & Algorithms, Operating Systems, Computer Architecture, Machine Learning, AI

Sept 2021 – Dec 2023

Cumulative GPA: 3.93

## SKILLS

- **Languages:** Python, JavaScript/TypeScript, C/C++, SQL
- **Frameworks:** React, Next.js, Node.js, Express.js, Flask, FastAPI, Tailwind CSS
- **Data Storage:** MongoDB, PostgreSQL, Prisma ORM, AWS S3, Cloudflare R2
- **Software:** GitHub, Docker, Kubernetes, Vercel, Railway, Porkbun, Figma
- **AI/Machine Learning:** Pandas, Matplotlib, Scikit-learn, PyTorch, Surprise, TensorFlow, OpenAI API

## EXPERIENCES AND PERSONAL PROJECTS

### SJSU SOFTWARE AND COMPUTER ENGINEERING SOCIETY [[sce.sjsu.edu](https://sce.sjsu.edu)]

March 2025 - Present

AI/ML Officer

- Fine-tuned ChatGPT 2.0 to process tokenized MIDI files for training for a GenAI app that allows musicians to accelerate their creative process by generating measures of music for different genres and time signatures

### TRENDSCOPE [[github.com/aryansh3lke/trendscope](https://github.com/aryansh3lke/trendscope)]

Feb 2025 – Mar 2025

Stack: Next.js, TypeScript, FastAPI, Python, OpenAI, Selenium, MongoDB, Tailwind, Shadcn UI, Vanta.js

- Performed abstractive summarization and sentiment analysis on the top 50 tweets from each top trend on X (Twitter) with the OpenAI API to give X users quick insights on current events, minimizing time spent scrolling
- Web scraped the top 10 trends and their tweets using Selenium's Chromedriver in Python, avoiding excessive scraping to not surpass X's strict rate limits and minimize overall costs for the deployed app
- Implemented a cron job to schedule periodic data scraping and analysis with FastAPI and utilized client-side caching in Next.js to significantly reduce the requests made to the MongoDB database to fetch the most recent data

### YT REHASHED [[github.com/aryansh3lke/yt-rehashed](https://github.com/aryansh3lke/yt-rehashed)]

June 2024 – Feb 2025

Stack: React Router, TypeScript, Flask, Python, OpenAI, Tailwind, Material UI

- Prompt engineered ChatGPT-3.5 turbo with the OpenAI API to summarize YouTube videos and analyze content creators so that YouTube viewers can easily obtain information on videos and channels of interest
- Integrated a rotating proxy to prevent the production IP from being blocked when scraping video transcripts
- Developed a video downloader feature for users that want to download the summarized video by using Youtube-DL and FFmpeg to fetch and then merge the audio and video streams together for high resolutions that don't have both

### ANIME RECOMMENDER [[github.com/aryansh3lke/anime-recommender](https://github.com/aryansh3lke/anime-recommender)]

May 2023 – Oct 2023

Stack: Next.js, TypeScript, Flask, Python, NextAuth.js, Prisma, Neon Postgres, Tailwind, Next UI

- Trained KNN and SVD collaborative filtering models with Python's Surprise library to build recommender systems that suggest anime to anime fans similar to famous streaming services like Crunchyroll
- Extracted and cleaned up large Kaggle datasets of user ratings with NumPy and Pandas in a Jupyter notebook to enable insightful data visualization with Matplotlib and Seaborn to extract relevant input features
- Added authentication and data storage with NextAuth.js (OAuth), Prisma ORM, and Neon Postgres to allow users to save animes to their personal watchlist to refer back to them in the future

### #INCLUDE WEB DEVELOPMENT CLUB [[includedavis.com](https://includedavis.com)]

Oct 2021 – Apr 2022

Front-end Web Developer

- Developed various routes for the front-end for a client Vietnamese organization and optimized the UX and loading times by leveraging Next.js and its static site generation capabilities
- Worked with web designers to convert Figma designs into React components to assemble the UI
- Built a separate full-stack recipe app with React and Node.js, integrating a public database, to simplify the search process for finding recipes and display the ingredients and instructions with an aesthetic UI built with Bootstrap

### YAPA KIDS [[yapakids.org](https://yapakids.org)]

Jul 2020 – May 2021

C++ Program Founder and Curriculum Lead

- Led a C++ program with a team of 6 high school student teachers and 3 curriculum creators
- Taught weekly programming classes via Zoom to 50+ middle school students during the COVID-19 pandemic
- Created a beginner-friendly C++ curriculum with clear explanations and examples tailored to younger students