

# Jeffrey Yang

[jeffreyjy.github.io](https://jeffreyjy.github.io) | [linkedin.com/in/jeffrey-yang-ucsd](https://linkedin.com/in/jeffrey-yang-ucsd)

## EDUCATION

<b>University of California San Diego</b> - San Diego, CA	Sep 2025 - Present
Master of Science in Computer Science	GPA: 4.00
<b>University of California San Diego</b> - San Diego, CA	Sep 2021 - June 2025
Bachelor of Science in Cognitive Science w/ Specialization in Machine Learning, Minor in Computer Science	GPA: 3.77
<b>Relevant Coursework:</b> Software Engineering, Database Systems, Operating Systems, Deep Learning, Recommender Systems	

## TECHNICAL SKILLS

- **Programming languages:** Python, Java, C, C++, HTML, CSS, TypeScript, JavaScript, SQL
- **Frameworks & Libraries:** FastAPI, Flask, PyTorch, NumPy, Vite, Pandas, scikit-learn
- **Tools & Environments:** Git, GitHub, VS Code, Cursor, Jupyter Notebook
- **Generative AI & Machine Learning:** Deep Learning, Large Language Models, Diffusion Models, MLOps

## EXPERIENCE

<b>Research Assistant</b> - de Sa Lab @ UC San Diego	Jan 2025 - Apr 2025
<ul style="list-style-type: none"><li>• Designed and ran experiments for classification of EEG readings of SSVEP brain responses to visual stimuli via machine learning.</li><li>• Developed Python scripts to preprocess large image datasets and organize stimuli into experimental conditions for synchronized display during EEG data collection.</li></ul>	
<b>Software Engineer Intern</b> - Mathzoos	Nov 2024 - Mar 2025
<ul style="list-style-type: none"><li>• Implemented backend services for a recruitment platform web application using FastAPI, SQLAlchemy, PostgreSQL, and Redis.</li><li>• Designed database models/schemas and repository/service layers to create 10 API endpoints for profile information management.</li><li>• Wrote custom error responses and comprehensive unit tests for all features to ensure consistent behavior and exception handling.</li></ul>	

## PROJECTS

- Vibe Glasses** - Contextual Music Recommendation
  - Built a prototype smart-glasses system that uses a camera to detect a user's surroundings and automatically play matching music.
  - Designed a Flask backend integrating a vision-language model and the Spotify Web API to classify scenes and control real time playback.
  - Implemented full hardware-software integration using an ESP32-CAM, Wi-Fi communication, and OAuth-based Spotify authentication.
- MIDI-Transformer** - Generative Music AI
  - Built a Transformer-based deep learning model with PyTorch to compose symbolic music conditioned on input sequences.
  - Created end-to-end preprocessing pipelines in Python to clean and tokenize a dataset of 170,000 MIDI songs.
- Bloom** - AI Powered Journal
  - Developed a full-stack journaling web application, using OpenAI's GPT API for real-time sentiment analysis and summarization.
  - Built a PostgreSQL database on AWS RDS and a Flask backend enabling users to create, view, and delete journal entries.
  - Designed a lightweight frontend using HTML, CSS, and JavaScript to present journal content and AI-generated insights.
- Concard** - Business Card Maker
  - Collaborated in an Agile environment with a team of 12 to build a web application for designing/sharing custom business cards.
  - Developed a drag-and-drop card editor interface using HTML canvases and responsive CSS for dynamic layout styling.
  - Maintained code quality with GitHub Actions CI/CD pipeline, unit testing, end-to-end testing, and JSDoc documentation generation.