

# Kyle Awayan

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Creative student with a passion for programming and digital media. Seeking the opportunity to leverage my skills and experiences to help improve this world, while expanding my knowledge and sharing it with others.

## Education

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### University of California, Merced

2020 - 2024

Major: BS Computer Science & Engineering

## Experience

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### Software Engineer I

May 2024 - Present

Chan Zuckerberg Biohub San Francisco

- Working on full-stack tools for complex data management, using Next.js, Vercel, Django, PostgreSQL
- Creating web portals and interactive visualization tools using React, Python, NumPy, pandas, AWS, deck.gl, Three.js
- Web portals and interactive visualization tools attract more than 1,000+ page views annually

### Undergraduate Student Researcher

February 2021 - May 2024

Cobian-Iñiguez Fire Laboratory, University of California, Merced

- Created image processing pipelines and tools to collect and analyze data from lab experiments
- Used tools such as OpenCV, scikit-image, Python, PyQt, and MATLAB

### Data Scientist/Front-end Engineer Intern/Contractor

June 2021 - August 2023

Chan Zuckerberg Biohub San Francisco

- Created tools for broad sharing of data from various research projects
- Included creating web portals and interactive visualization tools using React, Python, NumPy, pandas, AWS, deck.gl, Three.js
- Assisted colleagues with coding questions

### Photographer and Videographer

March 2018 - November 2020

Freelancer, Benicia, CA

- Captured special events (e.g. quinceañeras, anniversaries, weddings)
- Invited photographer or videographer colleagues when needed
- Provided the team with guidelines on what to capture, and welcomed suggestions from them

## Publications

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- Shixuan Liu, et al. **Kyle Awayan**, "An organism-wide atlas of hormonal signaling based on the mouse lemur single-cell transcriptome", Nature Communications, March 2024
- Jonathan Liu, et al. **Kyle Awayan**, "Concordance of MERFISH spatial transcriptomics with bulk and single-cell RNA sequencing", Life Science Alliance, December 2022
- Merlin Lange, et al. **Kyle Awayan**, "Zebrahub – Multimodal Zebrafish Developmental Atlas Reveals the State-Transition Dynamics of Late-Vertebrate Pluripotent Axial Progenitors", bioRxiv, June 2023
- Jeanette Cobian-Iñiguez, Amir Hessam Aminfar, Shusmita Saha, **Kyle Awayan**, et al., "The Transition and Spread of a Chaparral Crown Fire: Insights from Laboratory Scale Wind Tunnel Experiments", Journal of Combustion, July 2022
- **The Tabula Sapiens Consortium**, "The Tabula Sapiens: A multiple-organ, single-cell transcriptomic atlas of humans", Science, May 2022

## Selected Passion Projects

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### BusyMap

2022

Real-time monitoring of dorm study and lounge room occupancy.

- Motivated by the challenge of locating vacant study/lounge rooms in college dorms
- Utilizes Raspberry Pi and Bluetooth for occupancy detection, records to PostgreSQL database

- Online interactive map created with React shows room occupancy in real-time
- Completed for the HackMerced VII Hackathon with three other team members, won "Best Hardware Hack"

## vintage-influxdb

2021

*Detailed time-series recording of personal Spotify listening data.*

- Curious to see my listening habits over time
- Created a Node.js application to periodically ping the Spotify Web API and record to a database
- Using InfluxDB and Grafana, complex queries can be made to analyze and visualize the data

## Zuzu

2021

*Created a face recognition system to recognize faces in music videos.*

- Had trouble learning and remembering names of band members
- Used the face\_recognition Python library, powered by dlib and NVIDIA CUDA
- Used a sequential Keras model with TensorFlow for classification
- Used OpenCV to render overlays on the video of the face recognition results

## Gemini

2020

*A 'now playing' screen for Spotify.*

- Created a desktop app that shows a user's currently playing song
- Collaborated with a colleague, took advantage of Git, GitHub, and GitHub Actions
- Used Electron, JavaScript, and the Spotify Web API
- PKCE was implemented to authenticate with the Spotify API
- Has 130+ stars on GitHub

## Magic Mirror

2016

*A magical mirror that showed various information through the glass.*

- Constructed a frame that enclosed a two-way mirror and computer monitor
- Used an open-source Node.js based software for the interface
- Presented it at a local Maker Faire event

## Skills

**Technologies:** Next.js, Vercel, Node.js, OpenAI API, React, React Native, Google Cloud, Amazon Web Services, Terraform, Docker, PostgreSQL, Django, MongoDB, InfluxDB, Grafana, Arduino, Qt, Adobe Suite, Figma, Ableton Live, grandMA3, Resolume, TouchDesigner, Unreal Engine, Blender

**Coding Languages:** JavaScript, TypeScript, Python, C++, C, MATLAB, SQL, LaTeX, Swift, R

**Other Interests:** Music Production, Graphic Design, DJ, VJ, Stage Lighting Design, Music Theory, Skiing, Biking, Aviation, Traveling