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

University of California, Merced
2020 - Graduating in 2024

Major: BS Computer Science & Engineering

Experience

Undergraduate Student Researcher
February 2021 - Present

Cobian-Iñiguez Fire Laboratory, University of California, Merced

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

Data Scientist/Front-end Engineer Intern/Contractor
June 2021 - Present

Chan Zuckerberg Biohub San Francisco

- Creating tools for broad sharing of data from various research projects
- Includes 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
- Assisting 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 welcoming suggestions from them

Publications

- 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

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: Node.js, React, React Native, Google Cloud, Amazon Web Services, Terraform, Docker, PostgreSQL, Neo4j, 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