Sarah Yuniar

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EDUCATION

University of California, Davis

Master of Science in Computer Science — Expected 2025

Bachelor of Science in Computer Science and Engineering, *GPA: 3.78/4.0* — June 2020 - June 2023

SKILLS

- **Programming Languages**: (Proficient) C++, Javascript, Python, HTML/CSS, GLSL, Java; (Familiar) MATLAB, C, C#, Dart
- **Frameworks and Tools**: Git, ReactJS, NodeJS, Simple and Fast Multimedia Library (SFML), Dear ImGui, OpenGL, WebGL, PixiJS, DeckGL, D3, Unity, Docker, GitHub Actions, Virtual Reality Toolkit (VRTK), Visual Studio, Visual Studio Code, Postman, Windows, MacOS, Linux (Ubuntu)
- **Languages**: English (Fluent), Indonesian (Conversational), Japanese (Moderate)

EXPERIENCE

Graduate Student Researcher, *Visualization & Interface Design Innovation (VIDi) Lab* — *December 2021 - present*

- Developed terrain-based network graph visualizations for Oculus Rift using C#, HLSL, and VRTK on Unity.
- Developed a framework for semantic icons to use in conjunction with HexTiles in geospatial visualizations using DeckGL, D3, JS, and Python.

Graduate Student Researcher, *UC Davis University Writing Program* — *March 2021 - present*

- Upgraded Drift4, a web and MacOS pitch and transcript aligner application, from its third to its fourth version.
- Implemented a new polished interface using ReactJS and added dozens of new features using Python and MATLAB, optimizing application frontend and backend by more than 700% with React hooks and Python JIT annotations.
- Published an article on the SpokenWeb website announcing the updated application and recorded and edited tutorial videos.
- Deployed a web version on an Ubuntu server and maintained website uptime.

Software Developer, *UC Davis Molecular Computing Group* — *June 2021 - May 2023*

- Fixed bugs and implemented new features in Dart and Python for Scadnano, a web application for designing synthetic DNA structures, closing over 30 GitHub issues and improving user experience by implementing a loading screen and iconed menu.
- Organized and coordinated weekly group coding sessions of 3-5 people, ensuring everyone's ideas were considered and that project coding standards were followed.

Software Developer, *Speech Neuroengineering and Cybernetics Laboratory* — *August 2021 - May 2023*

- Developed an automatic speech recognition (ASR) component for Cochlearity, an improved hearing aid replicating the "cocktail-party" effect in humans and assisted with live captioning.
- Utilized ASR technologies such as Deepspeech, Google Speech Recognition, AWS Transcribe, and Wav2Vec2 using Python and implemented a testing pipeline using PyTest and GitHub Actions, achieving word error rates of less than 1% with a less than 1 second latency.

PROJECTS

symptom.space, *Hackathon Project* — *January 2021*

- Designed and implemented the testing result page in HTML/CSS for symptom.space, a demo project for HackDavis that streamlined COVID-19 survey procedures, utilizing the Material Design Lite CSS library and Jinja.
- Won HackDavis 2021 for Best Use of Google Cloud.

Fibonacci Spring Tree, *Personal Project* — *February 2020 - May 2020*

- Implemented graphical features such as shadows, depth of field, and ambient occlusion to generate a realistic 3D tree from scratch using C++ and GLSL. Also implemented an intuitive and aesthetic user interface using Dear ImGui.

ORGANIZATIONS

UC Davis Marching Band, *Member* — *September 2022 - present*

- Attended practices and performed baritone horn for university sports events and community events, including football halftime shows, Davis Picnic Day, and the San Francisco Chinese New Year Parade.