JUHENG WU

San Francisco, CA, Permanent Resident
+1 (415) 518-6992 | github.com/juhengwu | linkedin.com/in/juheng-wu-3474471ba/

EDUCATION

University of California, San Diego, La Jolla, USA   *Sep 2022 – Mar 2026 (Expected)*
B.S./M.S. in Computer Science & Engineering

SKILLS

- **Languages:** C++, JavaScript, Python, Java, SQL, HTML5, CSS
- **Frameworks:** Node.js, Spring Boot, Vue.js, React, Express.js, TypeScript
- **Technologies:** Scripting & Automation, CI/CD, Web Development, Internal Tooling, Database Systems, RESTful APIs, Data Structures & Algorithms, OOD, Software Engineering, Cloud Computing, Mobile App Dev
- **Platforms:** Git, Docker, GitHub Actions, AWS, Google Cloud, Linux, Ubuntu

EXPERIENCES

UCSD CSSA - Head of Development Department
UC San Diego – Chinese Students and Scholars Association (CSSA)   *Sep 2024 – Present*

- **Lead** 10+ developers across multiple projects; **Architected** and maintained frontend and backend infrastructure for the official CSSA website using **Vue.js, Node.js** and **Redis**.
- **Designed** and implemented an interactive historical activity timeline to visualize past and upcoming events, improving organizational transparency and planning efficiency by **34%**.
- **Hosted** weekly **sync meetings**, **Mentored** junior devs and established team-wide code review and documentation

Undergraduate Computer Graphic Researcher
UC San Diego – La Jolla, California – UCSD Center for Visual Computing   *Sep 2022 – June 2023*

- Researching differential operators on discrete meshes, Deriving novel techniques to improve the efficiency and accuracy of **computational simulations** in graphics using Closest Point Exterior Calculus.
- **Poster presenter** at the SIGGRAPH Asia 2023 Conference on Computer Graphics and Interactive Techniques

PROJECTS

Synapse: One-command AI-agent App Generator   *Feb 2025 – Present*

- **Developed** Python-based **LLM pipeline** for one-command full-stack app generation using **role-based agents**.
- Integrated Streamlit for **real-time UI generation**; modular architecture enables **scalable** deployments.

Bioinformatics | Marine Bacterial Culturability Prediction   *Jan 2025 – Mar 2025*

- Developed a novel polynomial-time approximation algorithm to extract characteristic genomic k-mers distinguishing culturable from unculturable marine bacteria**, reducing** NP-hard baseline complexity.
- Achieved >**98%** classification accuracy using a hybrid Modified **Greedy & Monte Carlo** strategy.
- Results revealed **highly conserved** and **positionally-aligned** genomic patterns in real-world dataset.

PantryPal: Online Recipe Generation Application   *Oct 2023 – Dec 2023*

- **Led** a 7-person team to build a cross-platform **web/mobile app** using **Agile Scrum** methodology.
- Collaborated on **user story** creation, **prioritization**, **estimation**, and **iterative planning** to Build reliable and maintainable frontend and backend systems enabling recipe generation via **GPT-4o** and **Whisper**.
- Integrated GitHub Actions **CI/CD pipeline**, improving **test coverage** and development velocity by **30%**.

Personal Portfolio Website | juhengwu.github.io/MyWebsite-v2   *Oct 2022 – Present*

- Developed a visually-rich personal website using **Jekyll**, **Liquid templating**, **Bootstrap**, and custom **CSS3 animations,** Hosted on GitHub Pages, **showcases** personal **projects**, **skills** and more about me!
- Designed and implemented **interactive UI** with dark/light mode, dynamic layout, and smooth scrolling.