Austin Wong

ayw005@ucsd.edu

EDUCATION

2023 – Present **University of California San Diego (UCSD)**, Bachelors, Bioengineering

2021 – 2023 **San Jose State University (SJSU)**, Bachelors, Biomedical Engineering

2018 – 2023 **College of San Mateo, Skyline College, and Canada College**,
Completed coursework for Associates in Computer Science, Physics, and Mathematic

SKILLS

Technical:

Computer-Aided Design Software: Fusion 360, Solidworks, Onshape, Formlab, Kura

Object-oriented Languages: Java, JavaScript, Python

Software: Proficient in Microsoft Office Suite, Google Suite, Adobe Creative Cloud, ImageJ

PROJECTS

2024 **Aran Lab, University of California San Diego** — *Student Researcher*

- Engaged in research on Cas13a and microRNA, contributing to the understanding of RNA interference mechanisms and their potential applications in diagnostics and therapeutics.
- Exploration of graphene and biomolecules to create novel biosensing devices, significantly advancing the field of disease detection and treatment.

2023 **Transvenous Pacing Catheter Adaptor Design Project (UCSD)** — *Researcher*

- Conceptualized and proposed the design of an adaptor for the Cordis introducer sheath that snugly fits the 5 French TVP catheter to facilitate quick and seamless placement without the risk of back bleeding.

2023 **Java Self-Projects**

- These are some of Java projects that I completed on my own. The projects cover a variety of topics, including basic input/output, data manipulation, and object-oriented programming.

2023 **Glucose Monitor Static Analysis (SJSU)** — *Project Lead*

- Conducted static analysis on a glucose monitor, comparing durability of two designs via Finite Element Analysis (FEA).
- Utilized curvature-based meshing and h-adaptive techniques for precise capture of critical regions.
- Analyzed stress distribution (von Mises) and equivalent strain in the devices.
- Calculated factor of safety, evaluating safety margins for each design.

2023 **Estimating COVID-19 Inpatient in the US using Python (SJSU)** — *Project Lead*

- Used publicly available data from public health agencies.
- Cleaned and manipulated the data using the Pandas library.
- Created interactive visualizations using Plotly express and Dash.
- Built an interactive local web-based data visualization tool.

2022 **FDA Risk Management & Device Simulation Project (SJSU)** — *Project Lead*

- Led a team of four engineers through a series of medical device simulations, emphasizing FDA compliance and risk management. Each engineer rotated through the roles of product manager, lead engineer, quality engineer, and test engineer for each simulation.
  - ***Product Manager***: Defined Intended Use and Requirements in line with FDA standards and 510k data.

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- ***Lead Engineer***: Created detailed specifications implementing Product Manager's requirements and ensured clear alignment.
- ***Quality Engineer***: Managed Risk Management File, identified hazards, defined submission type, and constructed a risk acceptability matrix. Analyzed five hazards for risk reduction.
- ***Test Engineer***: Developed five test protocols to verify/validate team's requirements and specs, ensuring alignment.

2021 – 2022 **San Jose State University Animal Care – Team Govy BME Project** *Researcher*

- ❖ Used SolidWorks to design the device, printed using Formlab, and cured the 3D print after it was resin printed.
- ❖ The goal was to fill in the damaged area of the beak as a prosthetic to support the bottom beak & reduce shifting.
- ❖ Ample wet lab experience in biology, general & organic chemistry labs.

2021 Summer **Google, CSSI: Online** *Participant*

- ❖ Project Name: Tic-Tac-Toe Combo.
- ❖ Combines Node.js, ExpressJS, p5.js, AI shape recognizer, sockets for multiplayer, etc.

WORK EXPERIENCE

2022 - 2023 **San Mateo County Libraries the Big Lift Inspiring Summers Program** *Summer Learning Facilitator*

- ❖ Led & maintained interactive learning experiences for Kindergarteners & first grade students. Collaborated with staff to run high-quality BLIS Program.
- ❖ Established & developed a growth mindset environment. Facilitated open-ended, child-directed projects. Embraced & incorporated youth creativity.

2022 – 2023 **Peer Connections at San Jose State University** *Advance Tutor*

- ❖ CRLA 1 & 2 Certificated

2022 Spring **SJSU Accessible Education Center** *Student Assistant*

- ❖ Welcomed & assisted visitors, managed accommodations materials, proctored exams, provided scribing & reading support.

** I appreciate your time and consideration **