

Kenneth Chew

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Education and Certifications

University of California, Los Angeles (September 2024- June 2025)

M.S. Mechanical Engineering, GPA 3.75

University of California, Riverside (September 2019- June 2024)

B.S. Mechanical Engineering, GPA: 3.71

Dean's Honor List 2019-2020

Relevant Coursework: Machine Design, Aircraft Flight Mechanics, Robotic Kinematics, Robotic Controls and Dynamics, Statics, Dynamics, Fluid Dynamics, Thermodynamics, Heat Transfer, Mechanics of Materials, Engineering Design and Development

Certified SolidWorks Associate (CSWA)

Private Pilot License

Technical Skills

3D CAD Design – Siemens NX, SolidWorks, Catia V5, and Autodesk Inventor.

Familiar with sheet metal, 3D-printing, and CNC design practices.

Fabrication and Assembly – Experience with power tools and 3D printing to manufacture and assemble components.

Electrical Wiring – Soldering, wire harness assembly, insertion and ejection of various connectors and contacts.

Matlab – Completed Matlab courses and utilized skills in various research and academic projects.

Work Experience

Mechanical Engineering Intern, Reliable Robotics (March 2023 – August 2023)

- Developed components for an autonomous flight conversion kit, enabling existing aircraft to operate fully autonomously from startup to shut-down.
- Owned the entire design-to-test development cycle of the landing gear wheel speed sensing system.
- Designed and conducted stress analysis on many components using Siemens NX, FEM, and hand calculations.
- Referenced FAA and NASA guidelines and regulations to ensure safety, such as the MMPDS and AC 43.13-1B.
- Built and operated a custom test bench to characterize inductive proximity sensors performance.
- Manufactured and installed landing gear and avionics components using a combination of in-house prototyping and fabrication methods as well as rapid-prototyping services.
- Held multiple design reviews for parts and systems prior to fabrication or aircraft installation.

Engineering Intern, Universal Hydrogen (September 2022 – March 2023)

- Supported the development, integration, and first flight of the world's largest hydrogen-electric fuel cell powered aircraft as part of the Powertrain and Flight Test team.
- Designed and developed test equipment and flight hardware, such a single-unit pump system with integrated current and polarity protection to prime powertrain coolant lines.
- Developed 3D-printed throttle quadrant to create a tactile control interface for future powertrain testbeds.
- Fabricated and assembled both low and high-voltage wiring harnesses for testbed and experimental aircraft EWIS.
- Utilization of power tools and machining to fabricate components for experimental aircraft hydrogen modules.
- Filmed and edited videos of technical development for outreach and promotional use.

UAV Research, UCR-Caltrans Noise Barrier Pollution Study (March 2022 – September 2022)

- Designed an autonomous UAV to measure atmospheric parameters such as windspeed, pressure, and temperature.
- Integrated pumping and sampling systems to enable airborne sampling of tracer gases to determine dispersion patterns downwind of the emission source at various altitudes and distances.
- Created Matlab script to derive windspeeds calculated from aircraft velocity and ground track measurements.

Student Research Lead, UCR-Caltrans Noise Barrier Pollution Study (June 2022 – September 2022)

- Led a team of undergraduate students in a UCR-Caltrans joint study on the impact of highway noise barriers on airborne pollution dispersion downwind of the source.
- Planned and executed the deployment of over 40 sampling systems into arrays at multiple field locations.
- Utilized SF6 tracer gas, analyzed samples using gas chromatography, and validated data using Matlab.

Projects and Organizations

Robotic Hand Prosthetic (March 2025 – Present)

- Developed a wearable prosthetic hand to assist individuals with limited wrist and finger mobility.
- Integrated both mechanical and electrical systems together using both affordable off-the-shelf components and custom 3D-printed structures.
- Conducted field testing to verify operation in real-world environments.
- Tested by individuals employed in the medical field and received positive feedback, such as potential use cases for stroke patient rehabilitation and neuromuscular degenerative diseases.

Computer Mouse Assistance Device (September 2023 – January 2024)

- Designed and developed a prosthetic device to assist individuals who do not have or are unable to use fingers other than their thumb.
- Utilized complex modeling within SolidWorks to design a single 3D-printed component with flexible compliant mechanisms, allowing manipulation of the mouse with minimal moving parts and assemblies.
- Tested and refined design through assisting an individual with a fractured hand.

President of Engineering, UCR Unmanned Aerial Systems (March 2020 – February 2022)

- Designed and tested VTOL-capable aircraft to accomplish a waypoint and payload delivery mission.
- Led all technical and business operations in UCR Unmanned Aerial Systems (UCR-UAS)
- Spearheaded the overhauling of all structures and operations within UCR-UAS to increase productivity.
- Coordinated the interdisciplinary development and integration of reliable and effective subsystems that comprise UCR-UAS' aircraft for the 2022 international AUVSI-SUAS competition.
- Managed UCR-UAS' recruiting campaign during the 2020-2021 academic year, resulting in a five-fold increase of members despite being limited to online operations due to COVID-19.