

Ryan K. Yamamoto

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EDUCATION

Master of Science, UC San Diego *expected to graduate June 2022*

- Mechanical Engineering — Focus in Robotics, Controls, and Dynamic Systems

Bachelor of Science, UC San Diego *graduated March 2021*

- Mechanical Engineering w/minor in Management Science, UC GPA: 3.84
 - Specialization in Robotics and Control, *Major GPA: 3.97*

Honors: Cum Laude, Provost Honors (≥ 3.5 GPA), HKN Engineering Honors (selected amongst top fifth of class)

EXPERIENCE

Maxar Technologies *Palo Alto, CA*

Structural Analyst Intern, *Structural Analysis* *Summer 2021*

- Utilized Femap and MSC Nastran to analyze structural integrity of spacecraft components, drafted sine vibration test procedures to verify satellite capability to withstand coupled loads associated with launch

Mechanical Design Engineer Intern, *Solar Array and Deployable Mechanisms* *Summer 2020*

- Designed tooling and test fixtures for various satellite projects, drafted and published technical drawings following engineering standards and practice, coordinated with manufacturing to get parts fabricated and detailed, developed and supported experiment procedures on spacecraft flight parts

Software Engineer Intern, *Software Development* *Summer 2019*

- Restructured spacecraft simulator to be able to process formatted data frames and telemetry for new spacecraft class, expanded automated testing app tool functionality to support newly developed spacecraft lines, improved testing queue file structure and process for future spacecraft simulation

UC San Diego Health *San Diego, CA*

Junior Analyst, *Facilities Planning & Management* *Nov 2018 - Mar 2021*

- Partnered with project managers to develop cost estimating tools, applied Six Sigma methodology to streamline administrative functions, optimized templates to support remote work efficiency

PROJECTS

Tracheostomy Support Inflatable Device *Jan - Mar 2021*

- Inflatable medical device made to support ventilation tubing and minimize physical injury, utilized skillsets in control feedback, electrical design, fluid dynamics, silicone molding, and sensor integration

KUKA YouBot Control Simulation *Mar 2021*

- Feedforward and PID control used to plan and execute the movement of a 5 revolute joint arm KUKA YouBot with omnidirectional wheels, utilized screw theory to determine trajectory paths and inverse kinematics to drive forward motion

Sound Following Napkin Delivery Robot *Nov 2020*

- Sound tracking differential wheeled robot designed to deliver napkins at the dinner table, integrated sound and ultrasonic sensors to allow for realtime obstacle avoidance and planning, implemented basic digital noise filters to improve sensor performance

TECHNICAL SKILLS

Mechanical Design Control design, Prototyping, Laser cutting, 3D printing, Milling, Metal cutting, Fluid Dynamics, Solid Mechanics, Linear Circuits, Statics, Thermodynamics, 3D CAD Modeling, CSWA Certified in Mechanical Design, AutoCAD

Programming Python, MATLAB, Java, Webdev, ROS, Arduino, Simulink

Other Linux, Machine Learning, Microsoft Office, Project Management