

Jack Kolb

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B.S. Honors Mechanical Engineering, UC Riverside

2016 – 2020

Work and Large-Scale Project Experience

UCR Autonomous Underwater Vehicle (UCR RoboSub)

Large autonomous submarine project competing annually in the international RoboSub competition

Project Lead

2018 – 2020

Managed the overall project; Worked with university departments and student organizations for budgeting and support; Increased our budget from \$2,000 to \$8,000+ through sponsorships; Established project management principles, standardized documentation, and systems engineering practices; Lead the development of a new submarine, from ideation to completion; Expanded the project into the premier student project at UCR, winning “Best Project” in 2019

Mechanical Lead

2017 – 2019

Led a team of 10+ engineers in developing torpedo systems, external battery pods, a WiFi-transmitting buoy, and various electrical housings and aesthetic components; Presented at outreach events, managed the project website and social media profiles; Ensured no leaks for 50+ water tests

Mechanical Team

2016 – 2017

Designed and constructed components of a submarine’s physical structure; Created a modular electronics housing and a watertight but accessible central electronics chassis, creations have lasted 3+ years of use

UCR Residential Life

Resident Advisor

2018 – 2020

Managed a resident building of 70+ first-years in UCR’s largest resident community; Engaged in emergency and crisis response, community development, first contact for personal and community conflicts, and bringing social and academic success; Awarded MVP for 2018-19

Undergraduate Research

2018 – 2020


Developed a system to record vibrations from electric motors and predict impending mechanical failure; Worked with UCR’s research board to apply the system on fume hoods across UCR

Other Project Experience

I love hacking, both in hackathons and on my own time! Here are two select projects:

Syncopate

Python, WSGI

 /syncopate

Distributed project load balancer, allows numerous computers to become nodes and connect with a central server to receive projects to run; Projects are run continuously, with mechanisms to immediately redistribute projects from broken nodes using saved state variables

Firewatch

Python, Raspberry Pi, Flask, HTML/CSS

 /firewatch

Uses 400,000 data points on California’s wildfire history, vegetation, and precipitation to predict the likelihood of wildfires across California

Student Organization Affiliations

Institute of Electrical and Electronics Engineers

Member, Officer

2016 – 2020

Officer of UCR’s IEEE chapter, project coordinator for RoboSub, showcased IEEE at outreach events, conducted administrative duties for the organization, led technical workshops (Soldering; Arduino; Raspberry Pi, Internet of Things; 3D Printing) and improved large-scale projects’ administration

American Society of Mechanical Engineers

Member

2016 – 2020

Project liaison for RoboSub, hosted a quarter-long weekly workshop preparing first-year mechanical engineers for success in their “weed-out” course

Association of Computing Machinery

Member

2017 – 2020

Member of UCR’s ACM chapter, led technical workshops at hackathons (Python Web servers; Pitching)