Kyle Fernan

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PROFESSIONAL SUMMARY

Dedicated and detail-oriented Mechanical Engineering student with a passion for delivering consistent work of the highest quality. Known for demonstrating excellence in areas of interdisciplinary communication, collaboration, diligence, and focus, supported by a wide portfolio of professional and project experience.

EDUCATION

University of California, Irvine - Irvine, CA *09/2022 - 06/2026*

B.S. Mechanical Engineering, Specialization in Mechanical Design, Minor in Business Management

Cumulative GPA: 3.77/4.0 | Dean's Honor List | Notable Courses: Static Structures, Electric Circuits, Materials Science

WORK HISTORY AND EXPERIENCE

UC Irvine Biorobotics Laboratory - Irvine, CA *04/2023 - Current*

Undergraduate Researcher

- Managing a student team developing a cable-based assistive horizontal stepping robot intended to provide early stage lower limb rehabilitation for spinal cord injured patients. Utilization of effective management, communication, and hands-on R&D strategies led to the successful delivery of a prototype robot for clinical trial
- Leading the design, prototyping, and implementation of a Haptic Simulation Device intended to provide sensation to patients' feet during rehabilitation with the horizontal stepping robot. Emphasis placed upon physiological factors led to optimized somatosensory stimulation, accessibility, and comfort for patients along with ease of use for therapists
- Designing custom PCB to elegantly integrate four subsystems into one, significantly reducing number of points of failure

Anteater Formula Racing (FSAE) - Irvine, CA *07/2023 - Current*

Human Interface Design Engineer

- Optimizing the race car's seat ergonomics through design according to research of driver anthropometric data and user feedback (ex. Increasing the height of the seat bottom's walls and implementing a bespoke foam cushion to improve driver stability during lateral acceleration without increasing vehicle weight)
- Establishing and maintaining consistent communications with Electronics, Powertrain, and Chassis subteams to identify and navigate component size constraints to prevent bounding box conflicts and other system interferences

Howe Neat Inc. (Agricultural Technology) - Benicia, CA *01/2022 - 09/2022*

Hardware Intern

- Developed accurate and repeatable methods for manual assembly and quality assurance of over 200 electronic soil quality monitoring systems
- Set-up and maintained 3D printers and industrial Pick and Place machine for rapid production
- Implemented a QR code inventory/BOM system that reduced human error in inventory replenishment by 50%

PERSONAL PROJECTS

3D Printed Bladeless Fan *10/2023 - Current*

3D Printing/Electronics

- Independent design of an easily 3D printable bladeless fan to explore the applications of fluid dynamic principles
- Using engineering best practices to create a two component device that requires no print support
- Researching and implementing optimal aerofoil geometry for maximized performance using ANSYS Fluent Simulation

Turret from "Portal" *03/2023 - 06/2023*

Solidworks Project

- Utilization of Solidworks to create a visually and kinematically accurate model of the Turret from the Portal games
- Creation of a complex chassis upon which a full set of internal components were mounted in an assembly
- Performance of Finite Element Analysis to simulate deformation during a collision similar to those encountered in game

SKILLS

- Software: SolidWorks (CSWA Certified)|Finite Element Analysis|ANSYS|MATLAB|Arduino|Microsoft Office Suite
- Technical: R&D|3D Printing|CNC Router/Mill|Laser Cutting|Electronics Manufacturing|GD&T|Technical Documentation
- Strong written, oral, and interpersonal communication skills

- Leadership and teamwork skills, comfortable in both collaborative and independent environments