QINGJIE SONG

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EDUCATION

University of Southern California September 2024-Present
Mechanical Engineering, Master of Science

University of California, Irvine September 2020-June 2024
Mechanical Engineering, Bachelor of Science

- Awarded with a Specialization in Design of Mechanical Systems

RESEARCH EXPERIENCE

Undergraduate Researcher, KULINSKY BINOM LAB June 2023-June 2024
UCI, Irvine,CA

- Designed a Smart Laser One way valve system to allowed separation of blood within a microfluidic disk during rotation at 2300 RPM, enabling future automation of blood diagnosis without standardized laboratory environment involved
- Manufactured microfluidic channel disk/channel,using machine operation such as CNC, with microfluidic Channel used to separate white blood cell from whole blood avoiding manual extraction after centrifuge process
- Presented Research Project at UCI Undergraduate Research Opportunities Program (UROP) Symposium,securing $600 funding for project

ACADEMIC PROJECTS

Suspension Team Member, Anteater Electric Racing(Student Project) at UCI, Irvine,CA March 2023-March 2024

- Created and Manufactured low-voltage enclosure, separating motor controller from high-voltage components
- Tuned existing suspension system to meet a tighter turning radius of 13.5 ft comparing to 17 ft originally
- Reworked 8 existing chassis mounts allowing fitting of accumulator team to integrates parts into system

Mechanical Design Lead, Bottle Lifter(Class Project), Irvine,CA January 2024-March 2024

- Evaluated and assigned each 3 subsystems design to teammate
- Assembled and integrated mechanical structure allowing a water bottle to be picked up and landed to an 25 centimeters elevated platform while maintain upright position during process

Suspension Team Member, Solar Car(Student Project) at UCI, Irvine,CA January 2022-March 2023

- Built and manufactured 90 degrees gadgets from sheet metal allowing aluminum chassis and using of rivets as mounting
- Developed a four bar linkage excel calculator to design double wishbone suspension
- Devised and partially assembled a suspension model to provide a better understanding of next generation of solar car double wishbone suspension

Control Engineer, autonomous Robot (Class Project), Irvine, CA January 2023-March 2023

- Coded a PD controller for arduino uno allowing a pressure power rover to autonomous turn and maintain direction according to magnetometer reading

TECHNICAL SKILLS

- Solidworks, Matlab, Arduino IDE, Microsoft Suite, Soldering, Power Tools, Riveting, Adobe Pro, Siemens NX (Design Associate Certified), Lathe, Mill, Wielding, CNC,Laser Cutting, 3D printing(FDM,SLA, and Binder Jetting)
- Mandarin (Native), English

MEMBERSHIPS

Triangle Fraternity; Served as External Vice president and Business Manager, reduced chapter dept to national to zero
American Society of Mechanical Engineers UCI; Served as one of member to restart chapter at UCI