Shashank Shekhar

Upcoming Graduate student
for Masters in Robotics
University of California, Riverside

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Summary

I am an upcoming graduate student, pursuing a Master's in Robotics at the University of California, Riverside. I am seeking part-time on-campus employment opportunities . I am a hardworking, diligent, and punctual individual with strong interpersonal and managerial skills.

Education

Degree	Institute	Board / University	CGPA/Percentage	Year
B.Tech ECE	Sharda School of Engg. & Tech.	Sharda University	7.83	2018-2022
Senior Secondary	Ishan International Public School	CBSE	74.40%	2017

Experience

- **Orangewood Labs** *May 2023 - Present*
  Electronics Engineer
  – Successfully designed, tested and implemented circuitry to resolve back EMF issues in current robots, effectively resolving a major challenge in power electronics.
  – Developing multi layer STM32-based PCBs for various electronics subassemblies, with expertise in working with hardware interface for protocols such as GPS, Wi-Fi, Bluetooth, CAN Bus, SPI, I2C, UART, USB, RS 232, and RS 485.
- **Triassic Aerospace** *Nov. 2022 - March 2023*
  Mechatronics engineer
  – I oversee drone fabrication, prototyping, and electrical testing for optimal performance and quality control.
  – Proven ability to lead cross-functional teams and manage projects from inception to completion, ensuring adherence to milestones and budgets. Expertise in engineering and project management makes me an effective communicator and a valuable team asset.

Technical Skills

- **Circuit design, Layout & Prototyping Softwares**: KiCAD, P.C.B. Prototype fabrication, Circuit debugging, D.S.O. Operation, Soldering (THT & SMD) components, P.C.B.A. Operation, SMD Rework.
- **3D Integration Softwares**: Solidworks, Fusion360, AutoCAD, Autodesk Meshmixer, 3D Slicer
- **Operating Systems & Programming Tools**: Windows, Linux, Python, C, Arduino
- **Hardware tools & Machining operations**: 3D Printing (F.D.M.), Laser cutting & engraving operations, Part fabrication(Lathe Operation, Welding ,Drilling & Milling)

Academic Projects

- **Upper Limb Exo-suit for Motion Amplification and Medical Rehabilitation** *Jan 2022 - May 2022*
  Guide: Asst. Prof.- Dr. Usha Tiwari, Sharda University **Youtube**
  – The objective of this project is to create an electromechanical system that augments upper limb mobility, with dual purposes of aiding industrial applications and serving as a tool for medical rehabilitation.
- **Low-Cost B.L.D.C. Actuator Fabrication using 3D Printing** *Jan 2021 - Jan 2022*
  Guide: Asst. Prof.- Dr. Shailendra Tripathi & Dr. Usha Tiwari **Youtube**
  – Created an affordable, adaptable robotic joint actuator, including a key element of testing the reliability and feasibility of 3D-printed planetary gearboxes in high-speed maneuvers.

Field of Interest

My areas of interest include 3D modeling, brushless actuator systems, mechatronics, quadrupedal legged robotics, mobile robotics, Robot Operating System (R.O.S.), manipulator arms, electric vehicles and embedded systems design.

Certifications

- **Introduction to Biomedical Engineering** Coursera
- **Understanding Research Methods** Coursera
- **Generative Design for Part Consolidation** Coursera
- **CSWA – Mechanical Design** Dassault Systèmes

Achievements / Awards

- Granted Design patent of **Brushless D.C. Motor** published in Indian Patent Journal (April 2023).
- Awarded Chancellor's gold medal for **Best Student Innovator** of Sharda University. (Oct. 2022).
- Granted Design patent of **Brush-less D.C. Motor Actuator** published in Indian Patent Journal (May 2022).

Miscellaneous

Hobbies: Cooking, D.I.Y. Projects, Reading. **Languages:** English, Hindi.