

Srinath Reddy S

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EDUCATION

B.E Mechanical Engineering, Rajalakshmi Engineering College, Chennai, India.

CGPA – 7.61

Jun 2019 – May 2023

WORK EXPERIENCE

Indian Institute of Technology Madras, Chennai, India

Apr 2024 – Present

Project Associate: Development of Sub Systems and Components for the UAV Ecosystem

- Lead Design Engineer responsible for battery and cell design, involving prototyping and testing of aluminum-air batteries for UAV applications as part of a research project funded by the Department of Science & Technology.
- Integrating Li-Ion and Al Air Battery packs for our 6kg Payload VTOL aircraft.
- Achieved significant milestones by attaining an energy density of 2353 Wh/kg at the cell level.

INTERNSHIPS

Garuda Aerospace Pvt Ltd, Navallur, Chennai, India

May 2023 – Feb 2024

Product Development - Battery (Intern)

- Developed custom lithium-ion battery systems for agricultural hexa drones consuming 5.3–10.6 kW
- Performed hands-on tasks such as spot welding and soldering to build and integrate battery packs for reliable drone operation.
- Tested and validated the battery by conducting load tests, thermal management assessments under various operating conditions, cycle life evaluations.

Agri drone: Manufacturing And Maintenance (Intern)

Jun 2022 – Nov 2022

- Played a key role in a seed-dropping drone project, including selecting and procuring components, and working on multiple prototypes.
- Successfully identified and resolved issues in crashed surveillance fixed-wing drones, significantly improving their operational efficiency and resulting in cost savings.
- Assembled and calibrated agricultural drones, trained local farmers on drone operations and consistently adapted to new technical challenges.

Vimanam Air Technical Pvt Ltd, Valasaravakkam, Chennai, India

Jan 2022 – May 2022

Drone Trainer (Part-time)

- Conducted comprehensive training sessions covering drone technology and facilitated hands-on drone assembly to equip individuals and groups with essential piloting skills.
- Fostered positive relationships with clients, addressing inquiries and concerns, and customizing training programs to meet their objectives.

ACADEMIC PROJECTS

Solar Powered Sailplane

Oct 2020 – Feb 2023

- Designed and developed a 2.4 meter solar-powered sailplane equipped with autonomous system (Pixhawk FC).
- Achieved a remarkable increase in flight endurance, extending from 45 to 74 minutes with the integration of a solar wing, resulting in a 64.4% enhancement in flight duration. [Project Link](#)
- Started working on V2 of the plane with a 4 meter wing span and 54 monocrystalline cells mounted to the with by encapsulating the solar ray a much better way to install the solar cells compared to V1(ongoing project).

Folding Wing Micro Class Plane

Feb 2023 – Jul 2023

- Designed and developed a micro-class plane with a 144cm wingspan featuring an innovative folding wing design that allows the plane to be compactly stored in a 3ft x 1ft box and rapidly assembled in under 60 seconds, enhancing portability and efficiency
- Secured 1st place in Best Innovation in the Micro Class Plane category at SAEDDC2023, [Project Link](#)

Design and build Li-Ion Battery pack:

Jul 2022 – Feb 2023

- Custom-built Li-ion battery packs using Samsung 18650 and Molicel 21700 cells, tailored specifically to meet the unique power requirements of my solar powered sailplane.
- The 4S battery pack can safely discharge at 420 watts of power. [Project Link](#)

ACHIEVEMENTS

- 1st prize in innovation under the SAE Drone Design Challenge (Micro class) **Jul 2023**
- 1st prize in Innovative project under the Innovation Project Cell **Mar 2023 & Oct 2022**
- 3rd prize in Best Mechanical Project at SRISHTI 2022 **May 2022**
- 1st prize in Avion (Glider Competition), Saveetha College **Sep 2019**
- 1st prize in Quadcopter at Roboprix, VIT College **Aug 2019**

SKILLS

Software: SolidWorks, SolidEdge, Catia, Mission Planner, QGC, Adobe After Effects, Final Cut Pro, Davinci Resolve, Photoshop, Illustrator, Visual Studio Code, MS Office.

Technical: Prototyping, Product Design, Battery pack making (Li-ion), Aeromodelling, Video editing, Poster design.

LEADERSHIP EXPERIENCE

Team Caption - SAE DDC AERO DESIGN COMPETITION **Sep 2022 – Aug 2023**

- Recruited and led a 10-member team selected from 54 candidates across the Mechanical, Mechatronic, EEE, ECE, and Automobile departments, organizing workshops, tests, and viva sessions to identify and finalize team members.
- Won first prize in the Innovation category in micro-class plane, outperforming 68 teams from across India.

Member - SEDS Club (Students for the Exploration and Development of Space) **Aug 2022 – Apr 2023**

- Conducted multiple workshops on UAVs for SEDS members and students from other departments, covering RC plane fundamentals—such as building and flying techniques.
- Participated in a workshop for a class of 150 middle school students, where we visited government schools to conduct free sessions on outer space, basic science projects, and UAVs. Led the UAV workshop.

Project Head **Sep 2021 – Sep 2022**

- Led and managed a team of club members to successfully execute various projects and initiatives, contributed to our college securing the title of the "Best Performance College Club in 2022"
- Started an initiative - The Covid Conversation, to increase awareness about the vaccine in rural parts of Chennai and encourage them to get the vaccine.

Design Board-Head, Yuva (Young Indians) **Sep 2020 – Sep 2021**

- Pioneered the introduction of motion graphic posters as the first design member, enhancing the club's promotional efforts with innovative design solutions.
- Edited videos for both the Yuva club and a core member in Recharge 2022 (Annual College cultural) responsible for promo videos and posters.

ADDITIONAL ACTIVITY (Freelance)

Freelance Content Creator (Video Editor) **Jan 2021 – Present**

- Responsible for all TVS Chennai, Patterns Furnishing, Iblinds, and social media video content.