M.A. SHASHWAT

• ma.shashwat@gmail.com • + 91 8095013585 • Bangalore, India

EDUCATION

MANIPAL INSTITUTE OF TECHNOLOGY **Manipal, Karnataka, India**
Bachelor of Technology, Major in Mechatronics, Minor in Electric Vehicle Technology **Expected May 2024**
Cumulative GPA: 8.4/10

WORK EXPERIENCE

OLA ELECTRIC **Bangalore, Karnataka, India**
Vehicle Engineering Intern **June 2023- Aug 2023**

- Conducted simulations of 2W and 4W models using Gamma Technology Software to assess regenerative braking performance using supercapacitors.
- Designed a flight controller utilizing PID control algorithms on the Arduino environment by integrating an MPU -6050 sensor and motor's Electronic Control Unit to precisely stabilize and control the drone.

PROJECT AND RESEARCH EXPERIENCE

MOTO MANIPAL **Manipal, Karnataka, India**
E-Powertrain Engineer **Nov 2020 – May 2023**

- MotoManipal is Manipal Institute of Technology's Electric Superbike team which participates in various national and international competitions.
- Designed the high and low-voltage circuits and worked on the wiring harness of an electric superbike powered by a 10kw PMSM Motor. Also worked on the calculation, design, and manufacturing of the lithium-ion battery pack.
- Developed an interactive dashboard using Python and RaspberryPi3 and collected data from the motor controller using CAN (Controller Area Network) through ESP32.
- Designed a data logging system for real-time performance monitoring and analysis.
- Worked on MATLAB and Simulink for Powertrain Modelling and Range Calculations.
- Actively participated in research of a hybrid energy storage system utilizing supercapacitor and battery.

BATTERY- SUPERCAPACITOR HYBRID SYSTEM RESEARCH **Manipal, Karnataka, India**
Electronics and Energy Systems **March 2021 – Feb 2023**

- Explored methods to enhance electric vehicle range and battery life by integrating supercapacitor with battery and reviewed Adaptive Fuzzy Logic Controller for energy management.
- Delivered a presentation titled "Investigation into the Performance of Battery Supercapacitor Hybrid Storage System" ' at the prestigious Interdisciplinary Conference on Healthcare and Technical Research (ICHTR) International Conference in November 2021.
- Submitted an abstract titled " Investigation into the Performance of Battery Supercapacitor Hybrid Storage System " to the International Conference on Technologies for Smart Green Connected Societies in November 2021.
- The abstract was selected for presentation at this esteemed conference, providing an opportunity to share insights and research findings with peers and experts in the field.

LEADERSHIP & ACTIVITIES

Team Leader at MotoManipal: Emerged victorious in the Electric Bike Design Challenge organized by Mechatron Motors. And secured third place in the National Online E-Bike Design Challenge (NOEBDC), a competition hosted by the Fraternity of Mechanical and Automotive Engineers, and
Active Member of Rotaract Club of Manipal: Organized blood donation camps and beach clean-up initiative.
Sports Captain at New Horizon Public School: Demonstrated effective leadership skills in organizing and promoting various national and state-level sports activities and events and enhancing sports and fitness within the school community.
Captain and Team Member of the Karnataka State Basketball team in the U-16 and U-19 age category tournaments.
Freelance Graphic Designer: equipped with skills in Adobe Photoshop and Illustrator.

SKILLS & INTERESTS

Technical: MATLAB, Simulink, Simscape, Embedded Systems, Robotics Operating System, C language, Python, CAD.
Language: English (Native Proficiency), Tamil (Native Proficiency), Hindi (Professional Working Proficiency).