



PARTH JAIN

BEng Mechanical Engineering
Heriot Watt University, 2021 - 2025

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SKILLS

• SOFTWARE

Onshape / SolidWorks / Catia, Witness, FEA, MATLAB, Python, Excel, Jira, Arduino IDE, CFD, BMS, Revit.

• MECHANICAL

Laser cutting, 3D Printing based on DFM principles. Tolerance analysis. Milling, lathe, drilling.

• ELECTRICAL

Arduino Uno, Soldering, Wiring, BMS, Pspice, Signal Processing

PROJECTS

COMPETITIONS

- Dual Hull Catamaran for collecting floating trash in lakes. Secured 3rd position in Mubadala.
- Application for live tracking of pitch and yaw of an RC vehicle. Secured 4th position in YAS 4X4.
- Mechanical Sieve Filter, an original design, for Jukskei river, SA. Shortlisted for EWB competition.

SCHOOL PROJECTS

- Cantilever test to establish deflection/strain relation utilizing strain gauges and load cells.
- Powertrain modification of a solar panel cleaning robot.
- Ventilation and lighting system for a robot costume.

EDUCATION

- Heriot Watt University: BEng, 2021–2025, **GPA – 4.0 / 4.0**
- The Lawrence School Sanawar : 2005-2014

EXTRACURRICULARS

- Formula Student Team – worked on chassis and powertrain
- WATT Buds program: Mentored first-year students to help them adjust to university life.
- Organized CAD Design Workshop for 50+ students.
- Member of IMechE : Collaborated with the core committee on promotional activities

EXPERIENCE

• DRONE DESIGN & FABRICATION | Engineer/Designer | 2025

Hexacopter Payload Drone – Designed and fabricated for Jahez competition; custom CAD landing gear/ducts, Pixhawk + GPS integration, solved ESC calibration and vibration issues, achieved a 5 kg payload. Quadcopter Survey Drone – Built for Prototypes for Humanity; aerodynamic canopy, solved thrust imbalance and battery endurance limits.

• MAKERS VALLEY INITIATIVE | Engineer/Designer | 2024-2025

Lead engineer of a team of six. Developed a low-cost filtration solution for Jukskei River in South Africa. I designed a mechanical sieve filter constructed from locally sourced materials, ensuring affordability, ease of maintenance, and long-term durability - key factors given the region's limited infrastructure. Prototypes were developed using Onshape and Milling and CFD. The project was shortlisted for the Engineers Without Borders competition and praised by the panel for its simplicity and effectiveness

• TRASH COLLECTING CATAMARAN | Engineer | 2024-2025

Served as the lead engineer in the design and fabrication of a dual-hull catamaran for automated debris collection. Utilized SolidWorks and performed CFD simulations. Collaborated with a multidisciplinary team of 10 to develop a propulsion and steering system. Key challenges such as unbalanced buoyancy and directional instability were addressed through iterative design adjustments and 3D printed prototypes. Awarded 3rd position in the Mubadala competition.

• MARKETING INTERNSHIPS | 2024

- Coordinated a campus-wide promotion for MEFCC Comic-Con Festival, including organizing competitions and lucky draws.
- 1-month IT internship at The Giving Movement supporting network configuration and maintenance
- 2 - month internship at L'Oréal, conducting competitor analysis (e.g., Pantene, Head & Shoulders)

• SOLARIS KIT | Assistant Engineer | 2023

Assisted Dr. Faisal Ghani, in setting up a solar thermal collector exhibition booth. I designed and fabricated laser-cut acrylic stands for optimal viewing angles. My role combined technical support and pitching, ensuring the setup was visually engaging and well communicated.

• VOLUNTEERING | 2018- 2024

- Volunteered in several "Engineer for a Day" workshops, guiding students to 3D printing and laser cutting. I hosted an F1 model workshop for over 100 students (2021 to 2024)
- Raised funds and implemented a system to repurpose donated household items for the Earth Saviors Foundation, an NGO supporting the elderly and abandoned. (2018 to 2019)

• VINTAGE BOOKS INDIA | Business Owner | 2014-2021

Owned and managed a business, dealing in antiquarian books and movie memorabilia, overlooking inventory acquisition, sales and marketing