Aryaman Agrawal

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Education

Georgia Institute of Technology **May 2020 – Dec 2024**

Bachelor of Science in Mechanical Engineering

Relevant Coursework

- Engineering Graphics
- Computing Techniques
- Machine Design
- Engineering Dynamics
- Energy System Design
- Engineering Economy
- Circuit Analysis
- Material Science

Industry Experience

Tesla **May 2024 – Aug 2024**

Battery Design Engineering Intern *Palo Alto, California*

- Designed new **injection molded** replacement part for the battery allowing to a cost saving of **$200k** a year.
- Tested and analyzed multiple strategies to protect battery against **conductive fluid ingress**. Included multiple experiment designs, deciding passing parameters based on data, reasoning and decisions taken by the team.
- Prototyped multiple **sealing designs** for an electronic component to prevent the component from shorting. Designed **test PCBs using Altium** with modifications to complement the same.

Rivian Automotive **May 2023 – Dec 2023**

Manufacturing and Test Engineering Intern *Normal, Illinois*

- Designed a new jig to be used on the manufacturing line driven by a design change, and strategized the process change.
- Completed **commissioning** of multiple stations previously stagnated due to unmet requirements.
- Worked with supplier to install new equipment on an active line to meet specific **ergonomic requirements**.
- Built prototypes for new instrument panel and door testers and verified their functioning on a prototype line.
- Designed and prototyped new **jump-port connectors** to be used on the assembly line for power.
- Updated the **Bill of Process on Delmia** in line with the new process on the line for a section of the factory.

International Centre for Automotive Technology **June 2022 – July 2022**

Engineering Intern *Gurgaon, India*

- Researched and learnt about the internal combustion engine, calibration, **on board diagnostics** and vehicle emissions for 120+ hours. Executed basic functionality on an engine dynamometer.

GT Ecocar Mobility Challenge **August 2021 – May 2022**

Propulsions Systems Integration Engineer *Atlanta, Georgia*

- Converted a 2019 Blazer Chevrolet to a **hybrid vehicle** and equipped it with SAE Level-2 automation.
- Designed a rotatable and detachable mount for a display installed in the car to enhance **human-machine interaction**.

Inverted Energy **February 2021 – March 2021**

Battery Engineering Intern *New Delhi, India*

- Designed and engineered an enclosing case for the **battery management system** for increasing its durability.
- Tested the range of a three-wheeler vehicle with a Li-ion battery pack and monitored cell balancing.

Shigan E-Voltz **May 2017 – June 2017**

Research & Development Intern *Gurgaon, India*

- Conceptualized the design of regenerative braking on **three-wheeler electric** rickshaws to recover wasted energy.
- Company adopted the design and improved and commercialized it with their new fleet of vehicles.

Projects/Leadership

Prototyping Instructor | *Invention Studio at Georgia Tech* **July 2021 – Present**

- **Trained** users on waterjet, 3D printing, soldering, sewing, laser engraving, wood/metal working, and electronics.

Team Captain | *FIRST Robotics Team NeXT* **September 2014 – April 2019**

- Designed, manufactured, and programmed multiple autonomous robots with a holonomic drivetrain, projectile launcher, 6-feet extendable arm, and mechanism to grab cubes and stack them in a tower. Led a team to win multiple awards.

President | *Space Settlement Design Competition* **2018 & 2019**

- Elected to lead a team of 60 people, and **coordinated** between structure design, automation economics, and space settlement operation sub-teams. **Dick Edwards Award for Exceptional Leadership**, ARSSDC 2019.

Technical Skills

Engineering: Design for Manufacturing and Assembly, Technical Writing, Prototyping and Testing, Mechatronics System Design, Advanced Math (Multivariable & Linear Algebra), Engineering Computing Algorithms
Technical: Wood/metalworking, 3D printing (FDM & Resin), Waterjet, Soldering, Laser Cutting & Engraving, CNC, Lathe
Software: SolidWorks, Siemens NX, Autodesk Fusion 360, MATLAB, Microsoft Office, Python, Catia, Delmia, Altium