\*\*G CHETHAN\*\* | 20ME30021 | (123) 456-7890 | chethan.g@email.com | linkedin.com/in/gchethan  
  
\*\*Summary\*\*  
  
Highly motivated and results-oriented Mechanical Engineering (M.Tech Dual Degree) graduate specializing in Embedded Control, Software, Modeling & Design, and Artificial Intelligence from IIT Kharagpur. Proven ability to leverage technical expertise and leadership skills to drive innovation and achieve significant project outcomes. Expertise in mechanical design, simulation (structural and electromagnetic), and data analysis using tools like SolidWorks, ANSYS (Mechanical/Maxwell), MATLAB, and Python. Seeking an internship opportunity to contribute to challenging projects and further develop skills in a dynamic environment.  
  
\*\*Education\*\*  
  
\* \*\*Indian Institute of Technology (IIT) Kharagpur\*\* | Kharagpur, WB, India | M.Tech (Dual Degree) in Mechanical Engineering, Specialization in Embedded Control, Software, Modeling & Design, and AI | Expected May 2025 | CGPA: 8.50/10.00  
\* \*\*Sri Chaitanya Educational Institutions\*\* | City, State, India | AISSCE (CBSE) | 2020 | 95.2%  
\* \*\*Sri Chaitanya Educational Institutions\*\* | City, State, India | Secondary School Examination (CBSE) | 2018 | 93.8%  
  
  
\*\*Internship Experience\*\*  
  
\* \*\*MITACS Research Internship\*\*, Polytechnique Montreal | Montreal, QC, Canada | May 2023 – July 2023  
 \* Investigated and determined optimal solutions for actuating a prototype heart model through simulations and experiments.  
 \* Accelerated design validation time by 700% by developing an actuator system simulation in ANSYS Maxwell and Mechanical.  
 \* Reduced 3D printing time (SLA) for a heart model by 33% by optimizing print orientations, supports, and parameters.  
 \* Achieved <3% deviation between simulated and experimentally measured magnetic fields and forces of the soft actuator.  
  
\*\*Projects\*\*  
  
\* \*\*Formula Student Vehicle Design and Manufacturing\*\*, TeamKART - FSAE, IIT Kharagpur | Kharagpur, WB, India | January 2021 – Present  
 \* Designed suspension geometries in SolidWorks achieving target motion ratio of 0.74 after iterative simulations in OptimumK.  
 \* Formulated and simulated CV joint housing and spline hub dimensions in SolidWorks and ANSYS, achieving a Factor of Safety (FOS) > 2.5.  
 \* Reduced weight of wheel hubs and rockers by 15% while maintaining FOS > 3.8 through topology optimization in ANSYS.  
 \* Developed a MATLAB program to automate force calculations on A-arm linkages, reducing computation time by 90%.  
 \* Led the transition from 13” to 10” rims, analyzing Tire Testing Consortium (TTC, Calspan) data to select optimal tires for grip.   
\* \*\*Windscreen Wiper Mechanism Synthesis\*\*, Course Project, IIT Kharagpur | Kharagpur, WB, India | October 2022 – November 2022  
 \* Increased windscreen wiper swept area by 10% through an attached wiper design and developed a MATLAB simulator for motion analysis.  
 \* Utilized a 4-bar mechanism principle for the simulator and SolidWorks Motion to determine peak motor torque.  
 \* Achieved consistent time intervals of 1s and 1.5s between extreme dead center positions through motion analysis plots.  
\* \*\*Leap Motion Control of VLC Media Player\*\*, IIT Kharagpur | Kharagpur, WB, India | May 2021 – June 2021  
 \* Implemented hand gesture control for VLC Media Player using Python (PyAutoGUI) and Arduino (Arduino IDE).  
 \* Controlled 5 parameters (volume, speed, etc.) using ultrasound sensors to detect specific hand motions.  
  
  
\*\*Competitions and Conferences\*\*  
  
\* \*\*Formula Bharat Virtuals 2021\*\*, National Winners (Combustion Category) | November 2021  
 \* Ranked 1st overall (264.19/275) among 33 teams.  
 \* Awarded "Best Powertrain Package" for 19% performance improvement.  
\* \*\*Formula Bharat 2023\*\*, Project K6 (Combustion Category) | January 2023  
 \* Reduced vehicle weight by 30+ kg through design improvements in suspension, wheels, and braking systems.  
 \* Performed 200+ hours of testing as designated driver, providing feedback for system optimization.  
 \* Cleared all technical inspections; one of 4 teams to qualify for dynamic events.  
 \* Achieved 3rd place in Cost & Manufacturing and 8th overall among 30+ teams.  
\* \*\*Avinya - Night Driving Visibility Assistance\*\*, Product Design Competition, Bronze Medal | March 2023  
 \* Led a team of 10 to develop a low-cost (INR 16K) vehicle-mounted system to detect and display approaching objects/animals.  
  
\*\*Leadership Experience\*\*  
  
\* \*\*Head - Suspension, Steering, and Brakes Subsystem\*\*, TeamKART - FSAE, IIT Kharagpur | September 2022 – Present  
 \* Led 3 major vehicle dynamics upgrades, training 55+ members.  
 \* Managed INR 1.6M budget, implementing cost-effective manufacturing strategies.  
 \* Secured INR 6L in multi-year sponsorships.  
 \* Revived physical manufacturing processes, ensuring knowledge transfer.  
 \* Optimized EV project workflow, streamlining design, manufacturing, and procurement.  
\* \*\*Secretary, Students' Welfare\*\*, Acharya Jagadish Chandra Bose Hall of Residence, IIT Kharagpur | December 2021 – August 2022  
 \* Managed INR 40,000 budget, maximizing student welfare activities.  
 \* Organized events and sports competitions for 250+ residents.  
 \* Managed onboarding process for 60+ new residents during COVID.  
  
\*\*Skills\*\*  
  
\* \*\*Software & Tools:\*\* SolidWorks, ANSYS (Mechanical, Maxwell), MATLAB, Simulink, OptimumK, Microsoft Office Suite, Jupyter Notebook, Arduino IDE, Python  
\* \*\*Technical Skills:\*\* Mechanical Design, Structural Simulation, Electromagnetic Simulation, Suspension System Design, Arduino Programming, Race Car Vehicle Dynamics, Data Analysis, Prototyping, 3D Printing, Testing & Validation, CAD/CAM  
\* \*\*Soft Skills:\*\* Leadership, Teamwork, Communication (Written & Verbal), Problem-Solving, Time Management, Project Management  
  
  
\*\*Extracurricular Activities\*\*  
  
\* \*\*Sports:\*\* Silver Medalist, 55th Inter IIT Aquatics Meet (Water Polo); Gold Medalist, Inter Hall General Championship (Water Polo & Swimming)  
\* \*\*Technology:\*\* Guided Case Study Event, Inter Hall General Championship; Led autonomous bot development team.  
\* \*\*Social-Cultural:\*\* Silver Award, Choreography event, Inter Hall General Championship.