Naga Venkata Sai Teja Allam

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Current Address: 3434 Laurens Rd, Greenville, SC, 29607

EDUCATION

Master of Science- Automotive Engineering *GPA -3.66/4.0* *May 2021*
Clemson University, South Carolina, USA

Bachelor of Technology – Mechanical Engineering CGPA -8.47/10 *May 2016*
VNRVJIET, Hyderabad, India

SKILLS

- **Core-Software:** Hypermesh, ANSA, Simlab, Arduino.
- **Design Software**: Unigraphics NX.
- **Analysis Software**: Abaqus CAE, Simsolid, Plant Simulation, COMSOL.
- **Data Analysis**: Minitab.
- **Software Frameworks**: MATLAB, Simulink, ROS.
- **Scripting languages**: C, Python.
- **Soft Skills**: Problem-solving, strong work ethics, patience, time management, leadership, interpersonal skills.

RESEARCH EXPERIENCE – Research Assistant

NSF Cable Robot || Clemson University, Greenville, USA *December 2019 – till date*

Modeling a pipe to carry the fluidized concrete through it and analyzing the flow, the reaction forces occurred on the cable robot occurred during the fluid flow through the pipe.

WORK EXPERIENCE – CAE Engineer (3 years)

Senior Research Engineer || Hyundai Mobis, Hyderabad, India *June 2017 – August 2019*

Durability

- Worked on the *CHASSIS* module to review and analyze the FE models generated using Hypermesh, ANSA, Simlab.
- Analyzed fatigue life on chassis components like sub-frame, dustcover, electronic brackets and strength analysis on steering column assembly as well as rack housing and also the bolt-pretension analysis.
- Brought up automation in creating rigid connections in the lamp assembly by using a modeling tool ANSA and thereby helped in reducing the time by 30%.

Noise Vibration Harshness(NVH)

- Predicted the squeal noise for brake assembly and reduced the noise with necessary design improvements of the brake components.
- Achieved the time reduction of brake components by 40 % bringing up a new tool called ***Simsolid*** that can analyze the components without any mesh. This helped in reducing the time and also the cost incurred on the licenses of the tool.
- Predicted the normal mode frequencies of the steering column assembly through the FE model simulations using ABAQUS CAE.
- Performed analysis on the stiffness of the rack housing, a counterpart in column assembly and different parts of Conventional Braking System(CBS) assembly.

Graduate Engineer Trainee || Hyundai Mobis, Hyderabad, India *June 2016 – June 2017*

- Developed FE models for the various automotive spare parts like cockpit modules, headlamps, brake assemblies to predict their reliability, fatigue, strength, and crashworthiness and make design improvements based on the automotive standards.
- Automated the process of generating the mesh on different components by using TCL/TK script in Hypermesh and python scripting in ANSA and brought time reduction by 20%.
- Extracted the flow contact areas to aid in creating the volume mesh which is essential to run CFD simulations for HVAC systems, air vents, and the complete cockpit module.

Engineering Intern || Hyundai Mobis, Hyderabad, India *January 2016*

- Acquainted with the FE modeling techniques and thereby supporting the senior fellow engineers in the simulation process of the FE models.

ACADEMIC PROJECTS

Masters project - Clemson University, USA

Plant Layout Design *October 2019 – December 2019*

Able to reduce the manufacturing costs of the transmission system by designing a plant layout with the least capital cost that meets the monthly demand in producing bell housing, bearing housing and assembling them.

Embedded system and sensing signal processing *October 2019 – November 2019*
Object localization by sensing the distance through ultrasonic sensors using Arduino Uno.

Adaptive Cruise Control and Autonomous Lane-Keeping *November 2019 – December 2019*
Made an RC car run down the slope by tracing the line and keeping the distance from the obstacles by controlling the throttle and steering by using a controller.

Battery-electric sports coupe *November 2019 – December 2019*
Designed an electric vehicle with the least cost possible by applying the system-level thinking right from following the design constraints, occupant packaging, vehicle dynamics, powertrain of the vehicle.

Bachelors projects - VNR VJIET, Hyderabad, India

Human Powered Vehicle(HPV) *May 2014 – January 2015*

- Built a three-wheeled vehicle that can store energy through the kinetic energy developed while the vehicle is in motion with the help of a FLYWHEEL and use that energy when the driver wants to put lesser efforts.
- Designed the transmission system for the vehicle, energy storage component flywheel and followed the manufacturing processes to build the vehicle.

HONORS

- Achieved the ***Best Prototype model*** in HYUNDAI MOBIS 2018 for the technical presentation on Transparent Solar Windshield.
- Stood 3rd in Aquabotics, a robotic event in the inter-state technical fest 2012.

EXTRACURRICULAR ACTIVITIES

- Captained college BADMINTON team during under-graduation.
- Organized a college-level and organizational level sports events and took active participation.
- Organized and led technical events in the inter-state technical fests