

Aniketh Rayudu

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Education

University of Illinois at Urbana-Champaign

Bachelor of Science in Mechanical Engineering | Minor in Electrical Engineering

James Scholar | GPA: 3.59/4.00 | May 2024

aniketh@gravityequals10.com

Willing to Relocate

U.S. Citizen

Experience

Wieland | Engineer - CFD Analysis & Software Development | Ulm, Germany

October 2025 - Present

- Built a parametric Python generator for structured hexahedral meshes of internally finned tubes, automating coupled fluid-solid domain creation with helical grooves, boundary-layer inflation, and cyclic/conjugate-heat-transfer interfaces for OpenFOAM CFD.
- Automated a full parametric CFD workflow (NX CAD → cfMesh → steady-state RANS simpleFoam → post-processing) behind a single Python script, cutting a manual multi-tool process to one command
- Built a PySide6 GUI for a dual-circuit immersion-cooling rig, integrating NI cDAQ, Siemens S7-1200 PLC (OPC-UA), and EtherNet/IP flow meters through a thread-safe Python backend for bi-directional hardware control across 100+ live tags
- Designed a mediator-based controller orchestrating 4 parallel state machines and 3 real-time PID loops (flow, temperature, heater power) coordinating autonomous and manual modes with live sensor logging and CSV generation

Wieland | Site Engineer – Mechanical Design & Systems Integration | Carol Stream, IL

June 2024 - October 2025

- Responsible for the full stack of machine design, fabrication, electrical wiring, and PLC programming for site projects
- Synchronized a multi-node packaging line by networking three Rockwell PLCs to control conveyors and a 2-ton strapping machine, performed all mechanical rigging, and created a mechatronic edge-protection system using pneumatics and stepper-motors, integrating the assembly into the upgraded packaging line
- Designed and fabricated a 200lb gantry air knife system for a hot tin dip line using temperature-resistant materials, linear actuators, and Siemens TIA Portal for PLC and HMI logic

Tesla | Mechanical Engineering Intern | Brooklyn Park, MN

September 2022 – December 2022

- Designed rundown stations in SolidWorks PDM for assembly lines, incorporating Poka-Yoke and locating features by working with the original assembly line design and PLC engineers, machinists, and controls engineers
- Created and prototyped an ergonomic door seal applicator to be used in future Model Y medium output assembly lines

Klein Tools | Mechanical Engineering Intern | Lincolnshire, IL

May 2022 – September 2022

- Executed teardown analyses on returned field units to isolate root causes and coordinated design remedies with suppliers
- Improved the functionality of a drop tester through a motor upgrade to increase its speed and decrease downtime by 95%

Projects

Promoting Electric Propulsion Electric Boat Competition | Senior Design Final Project

January 2024 - May 2024

- Designed and built a 48V electric propulsion system for a competition unmanned boat, engineering the waterproof driveshaft power transmission and high-current electrical circuits (ESCs, safety contactors, battery integration).
- Led system integration and technical design reviews across a 12-engineer team, generating full BOMs, preflight checklists, and production drawings for custom-machined parts.

Illini Formula Electric | Suspension Team Lead | Champaign, IL

August 2020 – December 2023

- Designed a complete suspension overhaul for the 2022 car: 4wd in-hub motors and 10" wheels from 2wd and 16" wheels
- Utilized OptimumK vehicle dynamics to create optimal suspension geometry while leading a group of 15 students to create the first working suspension in over 2 years for the car

Skills

CAD/Software

Siemens NX, Solidworks, OpenFOAM, Fusion 360, Creo, OptimumK, FEA, Drafting

Programming/Electronics

Python, Java, MATLAB, Simulink, Siemens TIA Portal, RSLogix 500, Arduino, Raspberry Pi

Manufacturing

Welding (MIG, TIG), Mill, Lathe, Laser Cutting, Water Jet, 3D Printing, Soldering