SREEKANTH NETHA THATIKONDA

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EDUCATION

Arizona State University, Arizona, U.S.A. — **CGPA: 3.74 / 4.0**
Master's in Mechanical and Aerospace Engineering — ***Jan 2022 - Dec 2023***

Rajasthan Technical University, Rajasthan, India — **CGPA: 8.0 / 10.0**
Bachelor of Technology in Aeronautical Engineering — ***Aug 2017 - Aug 2021***

School of Aeronautics, Rajasthan, India — **CGPA: 8.4 / 10.0**
Bachelor of Science in Aircraft Maintenance Engineering – Avionics — ***Aug 2017 - Dec 2020***

TECHNICAL SKILLS

Design, Simulation and System Tools : Creo, AutoCAD, Fusion 360, SOLIDWORKS, CATIA V-5, CarSim, AmeSim, TeamCenter, ANSYS, 3D-Printers.
Programming Languages : Python, MATLAB/ Simulink, R, HTML, CSS, JavaScript, C, C++.
Project Management : Microsoft Excel, PowerPoint, MS Word, MS Project Tools, Frameworks.

PROFESSIONAL EXPERIENCE

Control Systems & Hydraulics Systems Engineer – CNH Industrial, USA — ***Aug 2023 - Present***

- Working on design, development, and detailing of Hydraulic and pneumatic components and systems for Skid Steers and Compact Track Loaders.
- Lead development of embedded applications using C and MATLAB/Simulink for electrohydraulic control, with 5 years of experience in embedded systems and real-time task scheduling, I/O interrupts, and memory-constrained optimization.
- Applied continuous integration practices using Jenkins and GitHub Actions to automate build, compile, and test for embedded applications.
- Generate innovate SSL/CTL hydraulic system design for CPM and Next Gen to enhance vehicle performance, customer value, and cost reduction.
- Creating engineering specifications, work closely with suppliers, and adhere to engineering standards and CNHi GPD processes.
- Experience working with Creo, TeamCenter, Automation Studios, AmeSim software's to develop hydraulic system designs, layouts, modelling, and simulations, ensuring adherence to project objectives and timelines.
- Develop planning for design, procurement, and validation, finalize test requirements suck as Fit up into lab skid, HALT Testing- transducers, System Integration Functionality Check and Collect and Analyze Data from various CAN systems.

Teaching Assistant Physics – Arizona State University, USA — ***Jun 2022 – July2023***

- Working as an Assistant Professor for Physics Lecture, Laboratory and played a pivotal role in instructing engineering and medical students on various topics including magnetic fields, electric wiring, soldering, breadboard connections and using microcontrollers.
- Effectively managed the CANVAS interface design, Documentation, record-keeping, and preparing course structure for students.

Mechanical Design Engineer - School of Aeronautics, India — ***Jan 2021 - Dec 2021***

- Compliance with GD&T specifications, Designing, V&V testing and verification of mechanical and electrical systems using CAD Software's.
- Work Closely with the mechanical design and manufacturing team to develop and modify parts for gear drives for saving materials.
- Performed inspections, diagnostics, and repair activities for mechanical and electrical designs after manufacturing using advanced test equipment, including oscilloscopes, multimeters, and spectrum analyzers and testing durability and reliability with NDT Testing.
- Experience with industrial standards ASME Y14.5, ISO 26262, ASIL. D0-178, DO-160, DO-254, ARINC 429, 629, 717 and CFR PART-25.

Mechanical Design Engineering Intern- Hindustan Aeronautics Ltd., India — ***Jan 2019 - Dec 2019***

- Designed and Manufactured ALH DHRUV, CHETAK vehicle components of Helicopters according to EASA DGCA CAR PART 121 and 145 regulations.
- Designing and testing to validate structural designs of aircraft structures and FEA analysis via CAD software's, CFX, Abaqus and Hypermesh.
- Expertly disassembled, inspected, repaired, and reassembled Auxiliary Power Units and airframe components, including engines, hydraulic systems, and flight controls, ensuring optimal functionality and performance.

PROFESSIONAL PROJECTS

Multi-Function Loader Valve |CNH Industrial — ***Aug 2023 - Present***

- Led the design and development of multi-function hydraulic control valves for Skid Steer and Compact Track Loaders (SSL/CTL), optimizing system efficiency, flow control, and performance reliability.
- Engineered and integrated advanced hydraulic circuits for precise control of loader functions, including lift, tilt, auxiliary operations, and attachment tools, ensuring seamless machine operation.
- Conducted comprehensive flow analysis, pressure calibration, and system validation using CAD/CAE tools, enhancing hydraulic performance while collaborating with cross-functional teams to ensure durability and compliance with industry standards.

Steer-By-Wire System Design and Simulation | Arizona State University — ***Jan 2023 - May 2023***

- Designed and simulated a robust SBW system model, with steering input, sensors, LiDAR Controls, control algorithms, and electric actuators using MATLAB/Simulink. Performed MIL, SIL, HIL for testing and verification of Model Based Designs.
- Implemented a Co-simulation between MATLAB/Simulink and CARSIM, leading to efficient data exchange and system integration. Performed extensive simulation tests and analyzed stability, control response, and steering accuracy.

Adaptive Powertrain System Design and Modeling | Arizona State University — ***Jan 2023 - May 2023***

- Designing of comprehensive adaptive powertrain system model using Python, Simulink, and MATLAB with the integration of mechanical, electrical, and control components.
- Developed custom hardware interfaces using Arduino to integrate the powertrain system with sensors, actuators, and control modules.
- Executed simulations to evaluate system performance under extreme driving conditions and optimized system parameters and control algorithms.

Thrust Vector Control | Major Project Rajasthan Technical University — ***Jan 2021 – Aug 2021***

- Achieved controllable adjustment of mainstream deflection of 12.4 degrees for fluidic thrust vector control technology using secondary airflow.
- Performed analysis using ANSYS, CFX FLUENT and designed using CATIA and SolidWorks.

CERTIFICATIONS

Applied Control Systems: Math + PID + MPC | Udemy — **July *2023***

- Skills: Linear and Non-Linear Systems, PID Control, Sensor Fusion, Path Planning, ML, Simulation and Testing, Autonomous Vehicles, UAV.

Python for Data Science, AI, ML for Production & Development | Udemy — **July *2023***

- Skills: Pandas, NumPy, SciPy, MatPlotLib, Selenium, Data Science, Statistical Data Analysis, Python (Programming Language).

Six Sigma: Green Belt | IIBA | Linkedin Learning — **July *2023***

- Skills: Statistical Knowledge, Problem-Solving Skills, Data and Process Mapping Analysis, Teamwork and Leadership, Root Cause Analysis.