HARISH REDDY THALLA

(+91)8096334597 • harishreddythalla@gmail.com • linkedin.com/in/harishreddythalla • harishreddythalla.github.io

EDUCATION:

National Institute of Technology Warangal *Warangal, India* | ***2017 - 2021***
B.Tech in Mechanical Engineering - **CGPA: 7.5/10 | CS Courses CGPA: 8.18/10**
Relevant Modules: *PSCP(CS101, CS102), OOPS(CS390), M-1(MH101), M-2(MA151), TT(MA236), NSM(MA261), Robotics(ME461)*

PROFESSIONAL EXPERIENCE:

Data Scientist - Standard Chartered Bank ***Jul 2021 - Present***
- Developing generative conversational chatbot using encoder-decoder LSTM models to aid with banking queries
- Increased customer interactions by over 18% by deploying & maintaining the chatbot framework for domain specific reusability.

Robotics & AI Engineering Intern - *Aufenbach* ***Sep 2018 - Aug 2020***
- *Project Armatus*: Enhanced gaming experience by developing an ML powered VR setup & *omnidirectional treadmill* using Human Activity Recognition model built on CNN-GRU architectures to map IMU sensor activities to VR environment.
- *Self-charging peripherals*: Achieved self-powered computer peripherals by designing electromagnetic energy harvesting mechanisms

Machine Learning Summer Intern – *Balnc Care* ***June - Sept 2019***
- Built a 200k basketball activity image dataset by designing a Human Pose Estimation model using stacked conv-deconv framework.
- Developed a basketball activity classification model using KNNs, TPOT and CNN-LSTMs for intelligent scene analysis.

Research Intern | Machine Learning Applications on Image Processing | NIT Warangal ***May - June 2019***
(Advised by Prof. J Ravi Kumar)
- Provided Research Assistantship on multi-feature fusion architecture using HOG & VGG-Face for facial expression classification.
- Gave 3 seminars to 40 freshmen students on engineering applications of optimization techniques.

Machine Learning Research Internship | NIT Warangal ***Jan - May 2019***
(Advised by Prof. Hari Kumar Voruganti)
- **Stress Analysis using CNNs**: Reduced stress analysis computation time from 6 minutes to 1 second with 0.32% mean relative error using CNNs and squeeze-excitation architectures like SE-ResNet that produce approximated stress fields for cantilevered structures.

Mentor, Educator- Unacademy Tutored Mathematics & Physics for class XI and XII JEE aspirants ***Feb - May 2018***

PROJECTS:

Optimization of Welding parameters using GA and PSO algorithms | NIT Warangal ***July 2020- June 2021***
(Undergraduate Thesis, Advised by Prof. Hari Kumar Voruganti)
- Improved weld strength & removed unnecessary distortions of Arc welding by optimizing control variables using Genetic and Particle Swarm Optimization Algorithms.

Robocon International Competition | Undergrad Robotics Research Association ***July 2019- June 2020***
- Designed and fabricated 2 autonomous robots that collaboratively perform complex tasks on Rugby balls.
- Executed Motion planning & path planning with grid & sampling-based algorithms. Implemented object tracking using R-CNNs and DeepSort Techniques to actuate Robot's pneumatic system.

PATENTS:

- System for Harvesting Electrical Energy Generated from Mechanical Energy | **Application No** : 202041057250 | **Status** : Published

PUBLICATIONS:

- Self-charging Peripherals with inbuilt Power Harvesting System
  Conference: ICMSMT2020 | **Published in** : IOP Conference Series | **DOI** : *10.1088/1757-899X/872/1/012036*

SKILLS:

Artificial Intelligence | Programming | C++ | Python | Matlab | Tensorflow | Computer Vision | RNNs | GANs | Project Management

COURSES & CERTIFICATIONS:

- *Robotics: Vision Intelligence and Machine Learning* | University of Pennsylvania | EdX Audit
- *Machine Learning A-Z: Hands-On Python In Data Science* | Udemy
- CS231N- Convolutional Networks | Stanford University | Youtube | Audit
- *Machine Learning* | Coursera | Andrew Ng
- *Neural Networks and Deep Learning* | Coursera | Andrew Ng
- *Data Structures and Algorithms* | GeeksforGeeks

EXTRACURRICULAR ACTIVITIES:

- Co-Founder - Phasors, startup aiming to provide free education to underprivileged students.
- Founder, Team Lead– Undergrad Robotics Research Association, NITW
- Joint Secretary- Mechanical Engineering Association, NITW
- Event Manager (IPL Auction) & Subcore - Technozion 2018 & 2019 (South India's biggest technical fest)

ACHIEVEMENTS:

- State 3rd Mark in Class XI Board examinations (Telangana | 2016)
- 1st in *Innovation Garage* Hackathon - Ideathon (NIT Warangal | 2018)
- 2nd in *Innovation Garage* Hackthon - Makeathon (NIT Warangal | 2019)