HARISH REDDY THALLA

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EDUCATION:

National Institute of Technology Warangal *Warangal, India* | ***2017 - 2021***

B.Tech in Mechanical Engineering - **CS Courses CGPA: 8.48/10**

Relevant Modules: PSCP(CS101, CS102), OOPS(CS390), M-1(MH101), M-2(MA151), TT(MA236), NSM(MA261), Robotics(ME461)

PROFESSIONAL EXPERIENCE:

Development Lead, Data Science - TLM Recon, **Standard Chartered Bank** ***Nov 2023 - Present***

- **ServiceBench Copilot:**
  - Spearheaded the development of a RAG Copilot chatbot over ServiceBench documents using LangChain, FAISS vector store and Code Llama 2 7B-Instruct, reducing migration rework time by 30% and enhancing developer productivity by 26%
  - Integrated LangChain pipelines with ServiceBench's authentication, authorization, and Azure DevOps repositories to deliver secure, context-aware code/UI recommendations across 100+ legacy applications
  - Established key performance metrics, conducted bi-weekly sprint demos for stakeholders, and mentored a four-member team, laying the foundation for a scalable, company-wide AI copilot framework.
- **Fullstack development:**
  - GET(GBS Engagement Tool): Developing a consolidated application for tracking and managing GBS service requests, leveraging an internal framework(ServiceBench) using LitJs and Quarkus.
  - IAM & Rubikmas: Directed the migration of two Pega applications to the Servicebench framework.
- **Python & Shellscript automations:** Data extraction, transformation & cleansing scripts for unorganised xlsx, xml, pdf files
  - Email Integration: Engineered an extensive email integration framework using python to automate static creation in TLM.
  - ETL Logic Extractor(POC): Designed a script that extensively wrangle complex Informatica workflow XMLs to extract transformation logic and summarize them using LLMs(Llama and Mistral) for non-technical stakeholders

Developer, Data Science - DFT Data Science Team, **Standard Chartered Bank** ***Jul 2021 - Oct 2023***

Tech Stack: Frontend - Javascript, Typescript, React **|** Backend - Java, Python, Springboot, Flask **|** DB - Neo4j, Oracle SQL, Postgres SQL

- **Smartbot**: Transformed SmartBot's rigid rule-based flows into an NLU-driven conversational chatbot by implementing Rasa's intent classification with BERT, enabling context-aware query resolution and case redirection across 150+ intents and 20+ microservices, resulting in a 60% reduction in fallback rates. Automated 80% of routine tasks through API integrations
- **SCypher**: Worked on a D3.js-powered knowledge graph visualization application, enabling real-time exploration of 40M+ banking entities and their relationships, enhancing data-driven decision making.
- **Admin Portal and Smartbot**: Worked on developing a unified portal featuring 20+ self-service applications and conversational chatbots to explore and analyze data/insights for a comprehensive FAQ repository

Co-Founder, CTO - DineWave, PulsePalette Private Limited ***Aug 2020 - May 2021***

Tech Stack: Frontend - Javascript, React **|** Backend - Java, Springboot **|** DB - Postgres SQL **|** Cloud - AWS

- Ideated and developed a comprehensive suite of restaurant management software solutions, integrating customer interfaces, staff operations, and administrative controls, driving 30% operational efficiency and 26% revenue growth for clients
- Designed and implemented a vendor marketplace and direct-to-consumer delivery service, eliminating third-party fees and optimizing supply chain operations
- Successfully exited through **product suite acquisition for $25K USD**, with prior **recognition from Startup India** and **$5K AWS startup grant** and an invitation to join an exclusive venture capital portfolio

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.

PROJECTS:

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:

Full Stack Development | DataStructures & Algorithms | Programming | C++ | Python | Java | Javascript | Computer Vision | RNNs | GANs | Project Management |LLMs | Gen-AI |

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
- Logistics Lead Associate - E-Summit 2019 (Entrepreneurial Fest-NITW)
- Event Manager- IPL Auction, SpringSpree 2018 (Cultural fest - NITW)
- Logistics & Publicity Subcore- Technozion 2019 (Technical fest - NITW)
- Event Manager (IPL Auction) & Subcore - Technozion 2018 & 2019 (South India's biggest technical fest)

ACHIEVEMENTS:

- **GEM Individual Award-** SC TTO Functions for building the interface for interacting with Fine-tuned LLM Models
- **Exceptional Contribution Award -** Award for contributing to the ServiceBench community
- 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 Warangayl | 2019)