

Tharun Kumar Korine Palli

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Summary

AI Engineer with a Master's in Artificial Intelligence from THWS Würzburg and a Gold Medalist in Mechanical Engineering with a minor in Computer Science. Experienced in deep learning, object detection, and AI deployment using NVIDIA TAO Toolkit and Jetson Orin Nano. Proficient in machine learning, data science, NLP, and developing real-world AI solutions. With expertise in CNC machining, 3D printing, and innovative AI technologies, I aim to deliver impactful solutions in industrial and applied domains.

Experience

Master Thesis - AI Developer

Kitzingen, Germany

Pfeuffer GmbH Mess- und Prüfgeräte

Oct 2024 – Present

- **Detection of Wheat Grains on an NVIDIA Embedded System: AI Model Integration and Optimization:** Designing, training, and deploying object detection models using the NVIDIA TAO Toolkit to classify wheat grains and detect defects like mold, pest damage, and broken grains.
- Integrating the AI model on the Jetson Orin Nano Developer Kit, enabling real-time grain quality control and supporting seamless scalability for industrial use.
- Conducting research to optimize defect detection across diverse grain categories, ensuring high performance in production environments.

Machine Learning Engineer

Hyderabad, India

Infosys Technologies Private Limited

Aug 2021 – Mar 2023

- **Predicting the Future of Electric Vehicle Charging Demand** – Developed and implemented machine learning models (Auto Regressive, XGBoost, FB Prophet, LSTM) for accurate EV charging demand forecasting. Led the complete project lifecycle, including data preparation, model training, and deployment, to deliver actionable insights.
- **Rust Detection in Steel Pipes Using Deep Learning** – Designed and trained CNN-based models on large-scale image datasets to detect rust in steel pipes. Collaborated with a team to automate defect detection processes, improving accuracy and efficiency in industrial quality control systems.

Online Tutor

Remote

Course Hero

Dec 2019 – Jul 2021

- Provided tutoring in **Mathematics** and **Statistics**, including topics such as **probability**, **hypothesis testing**, and **algebra**, while assisting students globally in clarifying complex concepts, delivering personalized solutions, and improving academic performance with consistently positive feedback.

3D Printing Intern

Kurnool, India

VN Technologies

Jul 2019 – Sep 2019

- Operated FDM (Fused Deposition Modeling) machines for 3D printing, focusing on model preparation, troubleshooting, and executing prototyping processes.

CNC Programming and Machining Intern

Anantapur, India

APSSDC-Siemens Center of Excellence, JNTUA

May 2019 – Jun 2019

- Programmed and operated CNC machines, including toolpath creation, machine setup, and executing precision manufacturing processes following industry standards.

Education

Technische Hochschule Würzburg-Schweinfurt, Germany

March 2023 – Present

Master's in Artificial Intelligence

- Grade: 2,5*
- **Coursework:** Machine Learning, Deep Learning, Natural Language Processing, Computer Vision

G. Pulla Reddy Engineering College, Kurnool, India

Bachelor's in Mechanical Engineering (Major)

July 2018 – July 2021

- Grade: 1,3
- **Coursework:** Thermal Engineering, Advanced Manufacturing Methods, Robotics, CAD/CAM, Design of Machine Elements

Bachelor's in Computer Science Engineering (Minor)

July 2019 – July 2021

- Grade: A
- **Coursework:** Programming, Data Science, Operating Systems, Neural Networks

Projects

Technische Hochschule Würzburg-Schweinfurt

1. Deep Learning Approaches for Solving Sudoku Puzzles [🔗](#)

- Using CNN and LSTM for Sudoku puzzle solving and study showing CNN's superior performance.
- Tools Used: Pytorch, Deep Learning, Kaggle GPU, Jupyter Notebook

2. Future Pose: Predictive Modeling of Human Motion Dynamics [🔗](#)

- Predicted future movements of a person based on past skeleton data using GRU, achieving 86.64% accuracy.
- Tools Used: Python, Deep Learning, GRU, Jupyter Notebook

3. Sensor Fusion: Kalman and Particle Filter [🔗](#)

- Implemented Kalman and Particle Filters to estimate positions and velocities of projectiles under noisy measurements.
- Tools Used: Python, Kalman Filters, Particle Filters, Data Visualization

4. Optimizing Blackjack Strategies: A Reinforcement Learning Approach [🔗](#)

- Trained Q-learning and SARSA agents to play Blackjack, visualized policy and reward progression with dynamic epsilon decay.
- Tools Used: Python, Reinforcement Learning, Jupyter Notebook

5. Student Essay Sentence Classification [🔗](#)

- Analyzed student essays dataset and fine-tuned the BERT-Base-Cased pre-trained model from Hugging Face.
- Tools Used: Python, BERT, NLP, Hugging Face Transformers

6. Movie Genre Classification [🔗](#)

- Vectorized using basic methods and built machine learning algorithms and neural networks for genre classification.
- Tools Used: Python, NLP, Vectorization, Machine Learning

7. Predictive Analysis of Cloud Motion with CNNs and RNNs [🔗](#)

- Segmented and predicted cloud patterns using fisheye camera images to enhance meteorological forecasting accuracy.
- Tools Used: Python, Deep Learning, CNN, RNN

Certifications

- **Infosys** - Certified Software Programmer - Python [🔗](#)
- **Udemy** - Deep Learning A-Z 2024: Neural Networks, AI and ChatGPT Prize [🔗](#)
- **Udemy** - Data Science: Natural Language Processing (NLP) in Python [🔗](#)
- **Automation Anywhere University** - Certified Advanced RPA Professional [🔗](#)
- **Other Certifications** - [🔗](#)

Skills

Technologies: Artificial Intelligence, Deep Learning, Machine Learning, Computer Vision, NLP, Blue Prism, Automation Anywhere, Robotic Process Automation, Reinforcement Learning, Python Programming, Flask, Streamlit, Pytorch, TensorFlow, Microsoft Office - Excel, PowerPoint, Tableau.

Soft Skills: Time Management, Critical Thinking, Leadership, Communication.

Languages: ◦ German: ★★☆☆☆ ◦ English: ★★★★★ ◦ Telugu: ★★★★★