MURALI KARTEEK

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Education

UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN
MEng in Autonomy and Robotics
August 2025 Illinois, USA

INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR
B.Tech in Electrical Engineering
April 2021 Kharagpur, India

Coursework

Deep Learning Foundations And Applications• Machine learning• Embedded Systems• Control Systems Engineering• Probability And Stochastic Process• Computer Architecture And Operating Systems• Programming And Data Structures

Skills

PROGRAMMING/AI FRAMEWORKS
Python • C • Verilog• Keras• TensorFlow• Pytorch

SOFTWARE & TOOLS
ROS• GitHub• Docker• Anaconda• Linux• Arduino IDE• SolidWorks• OpenCV• GYM AI

LANGUAGES
English• Japanese• Hindi• Telugu

Scholarships

Scholarship For Higher Education (SHE)

Certifications

QUBIT BY QUBIT
Introduction to Quantum Computing Online Course Sponsored By IBM Quantum
Oct 2020 - May 2021 California, USA

DEEP LEARNING SPECIALIZATION.
Deep learning, Online Courses in coursera offered by DeepLearning.AI

Publication

ROBOCUP SYMPOSIUM
Research contribution in "KgpKubs 2019 Team Description Paper" which includes software, hardware and mechanical developments made by krssg from 2019 to 2020
April 2020 Kharagpur, India

Competitions

ROBOCUP SSL 2019
Qualified for RoboCup Soccer Small Scale League 2019
June 2019 Sydney, AUS

Experience

ROBOTICS ENGINEER
Konica Minolta
Oct 2021 – July 2024 Tokyo, Japan

- Specialized in industrial automation, particularly bulk bin pick-and-place robots.
- Applied classical and AI-based computer vision for precise 6-DoF item detection and prediction.
- Developed an algorithm using NANOSAM and Blip to automate training annotations for deep learning models, removing human effort and speeding up model training.
- Filled 2 patents in computer vision and Robotic grasping.

MACHINE LEARNING INTERN
Philips Innovation Campus
April 2020 - June 2020 Bangalore, India

- Expertly analyzed CT scans and medical images from Luna 16 dataset, utilizing advanced image pre-processing techniques.
- Created and deployed a 3D volumetric UNet model to effectively segment lung nodules.
- Advanced early-stage lung cancer diagnosis research through innovative image analysis and deep learning.

Projects

MULTITASK LEARNING WITH LANGUAGE USING AIRL
Konica Minolta & Georgia Tech
Nov 2021 - Aug 2022 Tokyo, Japan

- Collaborated with Professor Matthew Gombolay and research scholars from Georgia Tech to pioneer a language-driven approach for multi-task learning in manipulation domains.
- Achieved a remarkable 72% accuracy milestone, demonstrating up to a 200% enhancement in zero-shot task success rates and accelerated skill transfer to novel tasks, showcasing the power of language-based goal specification in robotics.

PORTRS : PAYLOAD ORGANIZATION AND TRANSPORTATION ROBOTIC SYSTEM
Konica Minolta & Japan Aerospace Exploration Agency
Feb 2023 - July 2024 Tokyo, Japan

- Collaborated with JAXA Japan Aerospace Exploration Agency to create a novel solution for visually assisting multi-limbed robot.
- Designed and optimized an AI model for grasping the existing in-ship interface and manipulating various objects inside International Space Station.

KHARAGPUR ROBOSOCCER STUDENTS' GROUP
Indian Institute Of Technology Kharagpur
Feb 2018 - April 2021 Kharagpur, India

- Key in FPGA control code design for motors and sensors in the Embedded Systems team, boosting soccer robot performance.
- Chosen for RoboCup, Sydney 2019 and Montreal 2018, showcasing tech skills and cross-team collaboration.
- Led assembly of 8 operational RoboCup robots, highlighting dedication and teamwork across university years.