Nanda Kishore Vasudevan

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LINKS

Github: nanda-kishore-v
LinkedIn: nanda-kishore-vasudevan

COURSEWORK

GRADUATE

Introduction to Robotics*
Computer Vision and Computational Photography*
Control and Optimization with Applications in Robotics*
* - current courses

UNDERGRADUATE

Pattern Recognition
Control Systems
Modern Control Systems
Data Structures and Algorithms

ONLINE COURSES

Machine Learning
Reinforcement Learning
Control of Mobile robots

SKILLS

PROGRAMMING

Over 5000 lines:
Python • MATLAB • C++ • LaTeX
Over 1000 lines:
C • Assembly • Arduino
Familiar:
CSS • PHP • JavaScript • HTML • Shell

LIBRARIES

ROS • OpenCV • Keras

SOFTWARES

Gazebo • Git • Simulink • TINA • PSpice

ACHIEVEMENTS

• Gold medalist in Electrical and Electronics Engineering at NIT Trichy.
• One of the 19 students selected from India for Viterbi-India Summer Research Program '17.
• Selected for DAAD-WISE scholarship '17.
• Recipient of Science Academies' Summer Research Fellowship '16.

EDUCATION

UNIVERSITY OF PENNSYLVANIA

MSE in Robotics — Expected May '20
Cum. GPA: N/A — Philadelphia, PA

NATIONAL INSTITUTE OF TECHNOLOGY, TRICHY

B.Tech. in Electrical & Electronics Engineering — Aug '14 - May'18
Cum. GPA: 9.72/10.00 — Trichy, India
Gold medalist

INTERNSHIPS

LIGHT WRITING WITH CRAZYSWARM

Viterbi-India Summer Research Program — May '17 - July '17
University of Southern California — Los Angeles, CA

- Developed an algorithm to autonomously perform light painting of text by a swarm of Crazyflie 2.0 quadcopters
- Generated trajectories for the swarm of quadcopters for any font and text

STRATEGY FOR EVADER IN PURSUIT EVASION USING REINFORCEMENT LEARNING

Science Academies' Summer Research Program — May '16 - July '16
IIITDM Jabalpur — Jabalpur, India

- Implemented Q-learning coupled with neural network in keras for the evader in grid-based pursuit evasion games.
- Obtained a success rate of 92.4% for the evader in simulations.

RESEARCH

ROBOTICS RESEARCH LAB

Undergraduate Researcher — March '17 - May '18
NIT, Trichy — Trichy, India

- Worked on path planning and trajectory generation for ground based multi-robot systems.
- Compared two path planning algorithms for multi-robot systems and used reactive and predictive control techniques to avoid collisions.

ROBOTICS AND MACHINE INTELLIGENCE

Vice president & Member — August '15 - May '18
NIT, Trichy — Trichy, India

- Soccer Robots: Built, fabricated and controlled four soccer playing robots in accordance with RoboCup Small Sized League (SSL) Rules.
- Mobile Robot Development Platform: Developed a research platform using low cost sensors like Kinect, IMU and wheel encoders endowed with the ability to perform SLAM (Simultaneous Localization and Mapping) indoors.
- All Terrain Hexapod: Developed a six-legged, disaster management robot inspired by R-Hex with the ability to walk, climb stairs and ramps, perform sound source localization and operate even when inverted.