KANISHK NAVALE

Autonomous Systems Engineer with experience in Deep Reinforcement Learning, Robotics, Machine Learning & Computer Vision working with 10+ teams & generating revenue over €4100 from 35+ projects, looking forward to working progressive mindset team to target acquired skills for innovative solutions design with continual value addition.

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WORK EXPERIENCE

04.2021 - 08.2021
Stuttgart - Germany

Wissenschaftliche Hilfskraft
Max Planck Institut für Intelligente Systeme

Pioneered haptics based robot physics engine as a student assistant in the company. Collaborated with the internal electronics engineering team of size 4 to modularize capacitive based haptic sensor enabling direct integration with robot core operating system.

1. Engineered smoother trajectory to >0.1 MAE for the ROS2 based robot using curve deviation driven optimization & numerical stable kinematics model leading to active singularity avoidance path.
2. Installed Haptic based Hybrid Controller in the robot with improved sensing by 55% incorporating probabilistic state estimation for the haptic sensor.

08.2018 - 08.2019
Hubballi - India

Research Assistant
KLE Technological University

Critiqued 3 student industrial automation & robotics research teams simultaneously. Cofounded an internal group acting as a consulting firm for local industries & research team to fabricate economical automation and robot controllers.

1. Manufactured motion control system based on Codesys EtherCAT technology priced at €113, making it 47% economical than competitors. Successfully demonstrated on internal built parallel robots & autonomous guided vehicles driven by ROS.
2. Devised PyTorch based General Adversarial Imitation Learning to improve gait control for a humanoid robot, decreasing onboard computation costs by ≅2.

06.2016 - 07.2018
Bengaluru - India

Robot Systems Engineer
FANUC India Pvt. Ltd.

Commissioned 48 industrial robots in welding, 2D & 3D vision, machine tending, IoT with predictive maintenance as part of the design & site team. Generated revenue of €39.874 from technical, commercial proposals.

1. Coded modular automated design reports & proposal generation systems with C# services, accelerating proposal to deliver project time by 30%.
2. Remodelled the cycle time estimation model to reconcile system breakdown time using LSTM based deep learning neural network improving proposal surety by an inhouse metric by 3 points.

EDUCATION

10.2019 - Present
Stuttgart - Germany

Universität Stuttgart
M.Sc. Computer Science (Autonomous Systems)

1. Constructed a deep learning model with Dense CNN + LSTM Layers with an accuracy of 57.24% for speech & language processing, ranking 2nd best model in the class using PyTorch.
2. Improved robot path planning by 60% fewer episode lengths from DDPG to TD3 RL Agent with Hindsight Experience Replay implemented in Tensorflow 2.

06.2012 - 06.2016
Hubballi - India

BVB College of Engineering & Technology
B.E. Automation & Robotics

1. Lead a student team of size 10 to participate in ABU-Robocon international event with 2 badminton playing robot.

PROFICIENCIES

- Math for Intelligent Systems
- Robotics
- Industrial Automation
- Computer Vision
- Machine Learning
- Deep Learning
- Reinforcement Learning
- Data & Text Mining
- Information Retrieval
- Embedded Systems
- Machine Design
- Python
- C#
- Tensorflow
- PyTorch
- ROS
- OpenCL
- MongoDB
- SolidWorks

ESSENTIAL SKILLS

- Team Management
- Communicative
- Adaptive
- Collaborative
- Persistence
- Out-of-Box Thinking
- Decision Making
- Schedule Management

LANGUAGES

- English (Native Speaker)
- German (Elementary)
- Spanish (Beginner)

DETAILS

- DOB: 26.10.1994
- Location: Stuttgart - DE
- Nationality: Indian
- Marital Status: Single

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