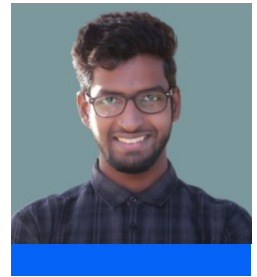


Praveen Kumar

Rajendran



+ Personal info

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+ Summary

I'm currently pursuing M.S. degree at KAIST. Earlier, I worked with SL Corporation as a Software Engineer on Software Testing for LDM, E-Shifters and ADAS systems. My research interests include deep learning, 3D computer vision and autonomous driving.

+ Work experience

03/2021 – PRESENT DAEJEON, SOUTH KOREA
Graduate Student Researcher
Korea Advanced Institute of Science and Technology

- Worked on *accident prevention ADAS* system using OpenCV, Deep learning-CNN, and Transfer Learning.
- Worked with ROS for the *parking robot* project.
- Collaborated on *PMD path planning* and trajectory prediction in heterogeneous traffic
- Working on *camera pose estimation* problems with deep learning
- Working on *point cloud GAN*

11/2017 – 02/2021 DAEGU, SOUTH KOREA
Automotive Embedded Software Engineer
SL Corporation

- Part Leader** for the Indian software verification Team at SL Corporation.
- creating and carrying out unit testing plans for LDM, Chassis, ADAS, Door side object detection system, Intelligent battery management system, and Camera monitoring system.
- Performed more than 250+ unit testing projects.**
- creating test cases and regression testing of application and board support package software.
- Analysing design documents, managing defect detection, test report and closure activities.
- Sent to HQ to closely work with developers and test engineers of various countries such as the USA, China, Korea and India.

01/2016 – 03/2016 CHENNAI, INDIA
Robotics & Embedded Systems Intern
Aerobotix

- Trained to work with Arduino UNO, Electronics, Sensors, Actuators and Programming microcontrollers
- Built different robotics applications such as line follower, RC boat, RC hovercraft
- Hands-on experience on Bluetooth and various modules for navigation

+ Education

03/2021 – PRESENT
Korea Advanced Institute of Science and Technology | GPA 3.9/4.3
M.S. (Future Vehicle Program)
Subjects: AI/ML, DL, Computer Vision, Autonomous Vehicle Systems

2021
Udacity
Self-Driving Car Engineer Nanodegree | 9 Projects
Term 1: Computer Vision, Deep Learning, and Sensor Fusion
Term 2: Localization, Path Planning, Control, and System Integration

06/2013 – 05/2017
Anna University, Chennai | CGPA 8.10 / 10
B.E. (Electrical and Electronics Engineering)
Subjects: Mathematics, Circuit Theory, Electrical Machines, Power Electronics, Embedded Systems, Control Systems, Object-Oriented Programming

+ Achievements & Recognitions

- Accepted to the **Oxford ML Summer School(OxML)** Jun 2022
- Full-funding support by **KAIST scholarship** for MS in Future Vehicle Program, Mar 2021
- Chosen for a **leadership position for a team of 24** people in SL Corporation.
- Recipient of **Udacity Technology Scholarship** powered by Bertelsmann for AI Track, Nov 2019
- Awarded **Korea cycling road grand slam** by K-Water for completion of cycling route of 1837KM, Republic of Korea, Aug 2019
- Go green award** for making an efficient solar vehicle for Asia's largest solar vehicle competition, ESVC, Mar 2017
- Won **2nd prize** for the Robotics event of PATHFINDER(Line Follower) in the national level technical symposium VISION 2016 organized by Anna University, Chennai, Apr 2016
- School topper** in on Higher secondary public examination, Mar 2013

+ Certifications

Self Driving Car Engineer Nanodegree
Udacity

Probabilistic Graphical Models 1: Representation
Stanford University

Deep Learning Specialization (Prof. Andrew Ng)
deeplearning.ai

Machine Learning (Prof. Andrew Ng)
Stanford University



Certifications

TensorFlow in Practice Specialization
deeplearning.ai

TensorFlow: Data and Deployment Specialization
deeplearning.ai

ISTQB Certified Tester
Korean Software Testing Qualifications Board

Korea Cycling Road Grand Slam
K-Water



SKILLS SUMMARY

LANGUAGES

Tamil	Native
English	Professional
Korean	TOPIK Level 1

PROGRAMMING

C	Professional
Python	Professional
MATLAB	Limited
C++	Limited

TECHNICAL SKILLS

Embedded systems	
Software testing	
Deep learning	
Robotics	
TOOLS & FRAMEWORKS	
Codestroll controller tester	Professional

VectorCAST	Professional
Git	Professional
PyTorch	Professional
TensorFlow	Professional
Pandas	Professional
NumPy	Professional
OpenCV	Limited
ROS	Limited



Academic Projects

📅 2021
End-to-End Autonomous Driving - PD551 KAIST
End-to-End autonomous driving using imitation learning
(Inspired by the famous NVIDIA paper) with the data collected from CARLA

📅 2021
Perception for AVs - PD803 KAIST
Camera Calibration, 3D Reconstruction

📅 2021
Deep Learning - AI502 KAIST
DCN Model Analysis with various optimizers and regularization techniques. LSTM, Transformer, BERT for extractive Q&A.

📅 2021
Operating System - EE415 KAIST
Kernel Threading, Process Scheduler, Nullptr Dereferences and Shared Page Handler, Filesystem Optimization(for small files)

📅 03/2017
Electric solar vehicle
ESVC-2017



Academic Projects

Made a Conventional Solar vehicle from scratch at low cost with a team of twenty five members for the Asia's largest solar vehicle championship. Secured 21st place out of 150 teams from all over asia. I was the vice captain of the team.

📅 02/2017
MPPT Controller
Bharat heavy Electricals Limited - Trichy 2017

Arduino based MPPT controller for solar-powered two-ton trolley for the extraction maximum available power from the solar panel advised by Dr Kevin ark kumar, BHEL Trichy.

📅 2016
Robotic Arm
2016

With the help of flex sensors, various motors and 3D printed objects made a robotic arm which will perform all the actions done by human hand simultaneously.



Publications

RelMobNet: End-to-end relative camera pose estimation using a robust two-stage training
Praveen Kumar Rajendran, S Mishra, L F Santos V, and D Har
<https://arxiv.org/abs/2202.12838>

Sensing accident-prone features in urban scenes for proactive driving and accident prevention
S Mishra, Praveen Kumar Rajendran, L F Santos V, and D Har
<https://arxiv.org/abs/2202.12788>

Socially acceptable route planning and trajectory behavior analysis of personal mobility device for mobility management with improved sensing
S Mishra, Praveen Kumar Rajendran, and D Har
<https://arxiv.org/abs/2112.03526>



Public Profiles



LinkedIn



GitHub



Medium



Volunteering

📅 2016 📍 CHENNAI
Workshop Co-ordinator
Aerobotix

📅 2016 📍 CHENNAI
Student Co-ordinator for Robotics club
Veltech Multitech Engineering College



Hobbies



Cycling



Hiking



Cricket



Exploring



Photography



Running