SANDEEP B

Mobile: +91-914-824-4126
LinkedIn: https://www.linkedin.com/in/sandeepb180994/
S-310, RA-Tower
Email: bsandeep527@gmail.com
IITK, UP, India

EXPERIENCE

Indian Institute of Technology Kanpur, Kanpur, India

Research Assistant/Project Engineer – Prof. K S Venkatesh July 2019 - Current

- Bottle Inspection. Client: Algo 8
- Remote Metrology of Hexagonal Wrapper Tube through Glass Medium. Client: IGCAR
- Sheet Counting. Client: TATA Tinplate
- Significant Responsibilities: Computer Vision, Product Development, Mechanical Design, 3D model development, and Robotics.

Research Intern – Prof. K S Venkatesh July 2018-Jun 2019

- Engine Inspection. Client: Tata Motors Prolife

EDUCATION

Manipal Institute of Technology, Manipal, India
Manipal Academy of Higher Education
Master of Technology – Industrial Automation and Robotics 2017-2018
GPA: 8.11/10

Indian Institute of Technology Kanpur, Kanpur, India
Master of Technology (Non-degree Student) – Electrical Department 2018-2019

St Joseph Engineering College, Mangaluru, India
Visvesvaraya Technological University, Belgaum
Bachelor's in Mechanical Engineering 2012-2016
Percentage:63.57

PROJECTS

Face Mask Detection in real-time (COVID-19)

- During the present pandemic face mask is one of the essential things for a human being, tracking every individual with a mask on is a challenging task in a crowded place, the system trained using a deep learning model to identify every individual with or without a mask.

Object Detection – Car Detection

- Car detection using the YOLO model

Techniques for Miniature Actuation and Imaging (Master's Thesis**)**

- Diesel oil engine inspection should be achieved without stripping down the system, to save inspection time.
- The fuel injector comes with two configurations likely, and the injector is parallel to the bore axis, and the injector inclined at a specific angle to the axis of the bore cylinder.

Investigation on the Performance and Emissions Characteristics of IC engine using different blends of Waste cooking Oil Methyl Ester-Ethanol-Diesel Oil (Bachelor's Thesis) [1]

- The experiment was achieved by keeping constant compression ratio and with varying speed, brake thermal efficiency, and brake specific fuel consumption increased when compared with diesel oil.
- NOx, CO, and CO2 emissions for ethanol blends are less compared with the diesel oil at higher loads.

Gesture Control of EMU two link Manipulator

- Controlling of EMU robot with a hand gesture, using the Inertial measurement unit sensors.

Smart switch

- An IoT enabled presence-activated smart lighting solution for use in the laboratories of the Mechatronics department of MIT, Manipal.

Motion Tracking

- Real-time motion tracking, used in different applications like videogames, military. The foreground and the background-subtracted to identify any movement in the frame.

SKILLS SUMMARY

Language: C++, Python, Embedded (8051), PLC
Software and Tools: MATLAB, OpenCV, Catia V5, AutoCAD, Robot studio, Fluidsim, Solid Edge, Ansys, IndraWorks Logic, Ultimaker Cura, Simatic Manager, Arduino IDE, Colab
Operating System: Linux, Microsoft Windows, and macOS
Deep learning: Vision and Tensorflow

CERTIFICATION:

- **Convolutional Neural Networks** an online non-credit course authorized by deeplearning.ai and offered through Coursera
- **Neural Networks and Deep Learning** an online non-credit course authorized by deeplearning.ai and offered through Coursera
- **Introduction to Machine Learning** an online course by the Duke University and offered through Coursera.
- **Programming for Everybody (Getting Started with Python)** an online course by the University of Michigan and offered through Coursera.
- **Diploma in Product Design** (Catia V5, AutoCAD, and GD&T) by CADD Centre Training Services.

TRAINING

- TwinCAT Software organized by Beckhoff Automation Private Limited.
- Graphical System Design & Virtual Labs using LabVIEW organized by the National Institute of Technology Suratkal.
- Computational Fluid Dynamics by HT India Labs.

PUBLICATION

[1] V. Kaliveer, P. R. Sequeira, R. V. D, S. A. Dsilva, B. Sandeep, and S. D. Rolvin, “Investigation on the Performance and Emissions Characteristics of CI Engine Using Different Blends of Waste Cooking Oil Methyl Ester-Ethanol-Diesel Oil,” vol. 6, pp. 28–32, 2016.

REFEREES

Professor K S Venkatesh, Electrical Engineering Department, Indian Institute of Technology Kanpur, Kanpur, India. Email: venkats@iitk.ac.in

Dr. Binu K.G., Associate Professor, Mechanical Engineering Department, St Joseph Engineering College, Mangaluru, India. Email: binuk@sjec.ac.in

Mr. Vijay Kumar Pandey, Assistant Professor, Mechatronics Engineering Department, Manipal Institute of Technology, Manipal, India. Email: vk.pandey@manipal.edu