SAGAR S DEYAGOND

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Data Scientist at Sandvine R&D Centre, Bengaluru

R&D Professional | Inventor| 7.5+ years of industry experience | Proficient in developing state-of-the-art deep learning and computer vision algorithms, with a focus on AI, IoT, Medical Imaging, ADAS, and Agricultural domains.

SKILLS AND DOMAIN EXPERTISE

- Python
- MATLAB
- C++ (Basics)
- Computer Vision
- Deep Learning
- Design of Experiments
- New Product Development
- Project Management

- PyTorch
- TensorFlow
- Robotic Operating System (ROS)
- Linux
- Containers
- Kubernetes
- OpenCV
- GIT

- Pandas
- Matplotlib
- NumPy
- Scikit-Learn
- SciPy
- MongoDB
- DVC
- Azure VM

WORK EXPERIENCE

Data Scientist @ Sandvine
Aug 2023- Present

Skills: Python, Deep Learning, Linux, PyTorch, TensorFlow

As a Data Scientist my role involves to do R and D to analyze the ISP data and define the model for the content classification for the Active Logic Application.

Lead Data Scientist @ Becton Dickinson R&D
Sep 2020 – Jul 2023

Skills: Python, MATLAB, OpenCV, Image Processing, Deep Learning, Linux, PyTorch, TensorFlow, Azure

*As a **Team Lead** for SITEScan project, developed a Computer Vision (CV) and Deep Learning based Vascular Access Management (VAM) Application to assist clinical nursing protocols; I led a team of 3 Senior Engineers and provided strategic & technical guidance and ensured successful delivery of the projects. Together we -*

- Created CV AI algorithms by designing experiments & data analysis with TensorFlow & PyTorch.
- Optimised Deep Learning algorithms, like YOLO v5 models to meet clinical requirements for VAM.
- Designed Vision System Architecture by collaborating with cross-functional teams.
- Developed MATLAB solutions for distance estimation using monocular camera and fiducial markers.
- Managed third-party vendors for data annotation and Android app modularization.
- Mentored six interns on image processing and deep learning assignments.

*As an **Individual Contributor**, I proposed several feature additions and ideas to enhance the product.*

- Developed hierarchical model for object detection & classification of medication delivery in clinics.
- Developed a computer vision based real-time volume tracking algorithm for medication syringes.
- Developed a data management workflow using the Azure Storage Explorer.
- Automated an E2E model training suite on Azure GPU Linux Compute.
- Developed a rapid PoC for computing the rising point for an ultrasonic signal for speed of sound.
- Designed medication error monitoring systems by tracking the patient associated components.
- Designed VAM experiments to evaluate the fiducial and non-fiducial marker performance and selection.
- Awarded "***Consistent Performer***" for 2022 for exceptional project contributions at India Campus.

*As an **Inventor**, I have strengthened the IP Quotient of Becton Dickinson R&D*

- Collaborated with the Front-End Innovation group in designing computer vision solutions.
- Contributed as key inventor in 12 IDRs related to Computer Vision out of which 4 are filed for patents.

Data Scientist I @ Visteon Technical & Services Center

Dec 2018 - Aug 2020

Skills: Python, C++, OpenCV, Deep Learning, ROS, Linux, Docker

We as an ADAS Team were responsible for developing L3+ ADAS Software using multiple car's mounted sensors. As a Data Scientist-I, I

- Developed Object Detection for RADAR Long Range and Short-Range sensors.
- Developed CNN-based Object & Free Space Detections on roads for 360° LiDAR using TensorFlow.
- Developed Camera based Lane Detection using Classical algorithms of Computer Vision
- Worked on Object detection by CNN using Caffe & PyTorch for Camera sensors.
- Worked on POC for the SLAM by building a small environment using Gazebo and ROS.
- Participated in project planning and tech stack investigation for L4 self-driving cars.

Software Engineer @ L&T Technology Services

May 2017 - Oct 2018

Skills: Python, C++, MATLAB, OpenCV, Deep Learning

- Developed PoCs to solve real world problems of agriculture, medical, and automotive industries employing Computer Vision Technology for 10+ clients.
- Developed a cancer cell classification algorithm using a Tablet-based camera.
- Assisted in developing an image stitching solution for X-Ray images of DICOM format.
- Developed Face Recognition application using OpenCV Haar Classifiers and TensorFlow Object detection.
- Developed a Facial node detection application, and an algorithm was implemented using Delaunay triangulation mathematical concept for detected facial nodes' triangulation.
- Developed a Drowsiness detection algorithm using Facial nodes detected using OpenCV and dlib.
- Developed an algorithm using MATLAB for consumer RADAR Image processing for people detection.
- Implemented an algorithm to detect the tomato flower in the images for a client.

Software Engineer @ Green Robot Machinery Pvt Ltd

Apr 2016 - May 2017

Skills: NodeJS, MongoDB, Web Development, IoT

- Developed a website to receive data from the users to calibrate sensors using NodeJS, MongoDB.
- Developed an image processing application to detect seat belts to monitor driver safety.
- Developed an IoT application for Face recognition to verify drivers tagged to a vehicle.
- Developed a prototype for a Fish Culture Pond to collect sensor data & upload the same to Cloud.

Test Intern @ Channel Bridge Software Labs

Nov 2015 - Mar 2016

- Complete testing of an Android application built for FMCG customers.
- Support and maintenance of data with weekly report generation for Clients.

EDUCATION

Bachelor of Engineering, E&C, 2015
P.E.S Institute of Technology, Bengaluru

8.95 / 10 CGPA

Pre-University Course, 2011
Karnataka Science College, Dharwad

91%

Matriculation 2009
Pavan English Medium High School, Dharwad

95.04%

PERSONAL PROJECTS

-   Remote Tele-Diagnostic Application in Pathology   *Jan 2015 - May 2015*
-   Sharp Turn Collision Avoider   *Sept 2013 - Jan 2014*
-   Soil Moisture Sensor for irrigation solutions   *May 2012 - Aug 2012*

ACHIEVEMENTS

-   Ultimate Engineer for building SUMO Bot in Inter College Competition   *2013*
-   All India Texas Instruments Analog Contest   *2014*
-   265th rank in Karnataka CET   *2011*
-   1st Prize in Karnataka Talent Search Examination   *2009*
-   MHRD Scholarship Award for outstanding performance in 10+2   *2011*