



ARUNJITH A

Senior Engineer - Data Science and Machine Learning

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SKILLS

- Python Machine Learning
- Deep Learning Data Science
- Signal Processing Simulation Models
- Computer Vision Azure
- C C++ SQL YOLO
- Faster RCNN Fast RCNN
- RCNN Anomaly Detection
- Object Detection

TOOLS AND LIBRARIES

- OpenCV Keras Tensorflow
- Pandas MATPLOTLIB
- Openpyxl unittestl
- Numpy Dlib Scikit-learn
- MATLAB

PROGRAMMING LANGUAGES

- Python
- C
- C++
- MATLAB
- SQL

ABOUT ME

Specialized in Signal Processing with more than 4 years of experience in areas like Machine Learning, Deep Learning, Computer Vision, and GBWM (Global Bandwidth Management System) algorithm development..

EXPERIENCE

Senior Engineer | Sasken Technologies

December 2021 – Present Bengaluru, India

- Interact with the client and understand the technical requirements
- Development according to the clients requirement
- Testing of the developed model

Engineer | Sasken Technologies

October 2018 – December 2021 Bengaluru, India

- Development of various Machine learning models and algorithms.
- Analysis of existing models and application in real life problems.
- Explore new techniques in the field of Machine Learning and Data Science.

Project Assistant | Aeronautical Development Agency

June 2018 – October 2018 Bengaluru, India

- Testing of the LCA(Light Combat Aircraft) simulator .

EDUCATION

M.Tech - Signal Processing

National Institute of Technology(NIT) Calicut August 2016 – 2018 June

Calicut, Kerala, India

- CGPA: 7.93

B.Tech - Electronics and Communication Engineering(ECE)

GEC Bartonhill 2012 August – 2016 June

Thiruvananthapuram, Kerala, India

- CGPA: 7.38

PROJECTS

Bandwidth distribution model development : GBWM

- Development of python model for simulating the behavior of GBWM(Global Bandwidth Distribution Model) system(Developed GQE(Global Quality Enforcement), GQoS(Group Quality of Services and many other sub algorithms).
- Development of new algorithms to increase the efficiency of bandwidth distribution by reducing bandwidth wastage and latency.
- Improvement and optimization of the model and introduction new features.
- Development of ASN2XL converter which help to visualize the message fields in ASN schema in a hierarchical format.
- Write unit tests.

Time series data generation using GAN for Industrial applications

- Development of GAN models for generating industrial time series data like Turbofan engine data, pump sensor data and cement kiln data .
- Conducted research and experiments on various GAN architectures like GAN, CGAN, WGAN, WCGAN and Time GAN.
- Modified the existing architectures for new data.
- Tested and visualized the generated data along with the actual data.
- Developed anomaly detection models based on isolation forest and density based algorithms to predict the system failure.

Face recognition and verification (Verifying the face image using Photo ID card)

- Verifying the person in the image is same as that the one in the ID card.
- Detection of face regions in the image, finding the key face points, rectifying the distortions due to rotation, identifying the best features for recognition and comparison of these features with the features of the image in the ID Card.
- Testing of the model against various scenarios causing distortion.

Text detection from images using OpenCV: Computer Vision

- Development of text detection model and integration with Tesseract in order to read it.
- Deep learning model (EAST) is used to detect text regions from images and aligned it based on orientation.

Development of new classification and dimensionality reduction methods using Graph Signal Processing

- Classification using regularization on graphs.
- Classification using adaptive graph filtering.
- Dimensionality reduction by minimizing the inter-class covariance and maximizing between class covariance using graph techniques.
- Research, development and analysis using MATLAB