

SAYAN NATH

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EDUCATION

Kalinga Institute of Industrial Technology

Bachelor of Technology in Information Technology, CGPA-9.02/10

Bhubaneswar, India

July. 2019 – Present

EXPERIENCE

Google Summer of Code 2021, Student

TensorFlow

May 2021 – Present

Remote

- Update the existing **BERT QnA**, **Text Classification** and **Smart Reply** examples in Android (Java) and iOS (Swift)
- Build and test the example in **Android (Java)** and **iOS (Swift)**. **Modify** this example to use the **TFLite Task Library** instead.

Data Science Intern

Jupiter AI Labs

April 2021 – Present

Pune, IND

- Worked with **OCR model** for converting Image to Text with **Keras**. Used that OCR model in **Flutter App**
- Created the backend in **NodeJs**, **Express**, **Redis**, **Socket.io**, and maintained **AWS server** with **EC2** and **S3** instances.
- Scaled complete backend with **horizontal scaling** to increase efficiency by **70%**

Machine Learning Engineer

Codebugged AI

Feb. 2021 – Present

Delhi, IND

- **Played** a major role for developing **Ikshana AI**. Worked with **TensorFlow Object Detection API** to **Computer-Vision** Models and used **TensorFlow JS** and **ReactJS** to deploy them in Web.
- Identified **Software & DB architecture** based on project **requirements**, performing version control &, refining product.
- Made many **Computer-Vision** models as per customer requirements. **Optimised** the models with various optimisation techniques like **Quantisation**, **Pruning** and **TensorRT**.
- Worked with **TF-Lite** to make inference in edge devices like Android and iOS Apps.

PROJECTS

Sanus A CADx Platform | TensorFlow, Flask, MERN, Flutter & Docker | GitHub

January 2021 – Present

- **Developed** a full-stack web application using with **Flask** and **NodeJs** serving a **REST API** with **ReactJS** as the frontend and **Flutter** as mobile application.
- The application can **detect diseases** with **one click** by upload the patient **electronic healthcare records** and **provide information** of various anomalies.
- In our platform, we are tackling **five major diseases** for now. We have deployed **light weighted Machine Learning** and **Deep Learning Models**.

MIRNet-Flutter | Flutter, TF-Lite & Git | GitHub

May 2018 – May 2020

- It is used to enhance a **low-light image** to a **bright image**.
- This project got a mention in **Google I/O 2021** as a notable **Open Source Project**. It is also enlisted in the **ML-GDE's E2E TFLite Tutorials** repository.

American-Sign-Language-Detection | Android, TensorFlow TF-Lite & Git | GitHub

Feb. 2021 – April 2021

- It is a **deep learning** based app where we can detect **American Sign Language**
- Used **MobileNetV2 architecture** to train the images. It handles up to **29 classes**.
- Used **Quantization Aware Training** to **optimise** the model and exported it to **TF-Lite** for deploying it in android app.
- The **average inference time** is **172ms**

PUBLICATIONS

Rahat - A Disaster Management App

In Project Innovations in Distributed Computing and Internet Technology, 17th ICDCIT

- Link