

SANKALP SHEKHAR

@ sankalp.shekh14@gmail.com +91 89616 92477 Kolkata, India
in linkedin.com/in/sankalp-shekh14 github.com/sankalpshekh14



EDUCATION

Manipal Institute of Technology
Bachelor's in Computer Science and Engineering
(Minor in Computational Mathematics)

2018 - 2022 Manipal, Karnataka

CGPA: 8.67/10.0

EXPERIENCE

Software Engineering Intern

Cloudanix

February 2021 - May 2021 Pune, Maharashtra (Remote)

- Designed a pipeline for training and real-time monitoring of events in AWS accounts.
- Implemented modules to perform anomaly detection on Cloud-trail event logs and API Gateway access logs.
- Created metrics for classifying unusual commits in GitHub repositories, based on commit history. The collected data was then passed through the same pipeline for anomaly detection.
- Deployed the real-time monitoring service as an AWS Lambda function.

Winter Intern

Ernst & Young LLP

December 2019 Gurgaon, Haryana

- Designed the pre-processing module for a project on digitization of tax invoices and shipping bills.
- Implemented functions for skew-correction, whitespace removal, removal of signatures, watermarks and stamps, and contrast enhancement.
- Improved the existing process of document recognition, by creating a model to recognise different sections of an invoice, as a proof-of-concept.

AI Division Member

Project MANAS

August 2019 - present Manipal, Karnataka

- Designed the Lane Switching module for passive lane changes, using sigmoid-based trajectories for university's autonomous vehicle project.
- Used behavioral motion planning, to create a game playing algorithm to corner sheep based on their colour.

CERTIFICATIONS

- Introduction to NLP by deeplearning.ai
- Deep Learning by deeplearning.ai
- Tensorflow Developer Certificate by deeplearning.ai
- Software Design and Architecture by University of Alberta

TECHNICAL SKILLS

Programming Languages:

Python C++ C Java SQL

Libraries:

NumPy Pandas Scikit-learn

Tensorflow PyTorch OpenCV

NLTK ROS Gazebo Carla

Frameworks and Database:

MongoDB AWS (Lambda, S3) Flask

Django FastAPI

PROJECTS

Research Paper Recommender

- Designed an API to recommend trending research papers on Twitter to a user, based on user preferences.
- The backend was built using FastAPI, and MongoDB served as the database.
- Twint library was used to scrape tweets, and Arxiv API was used to get the author and paper abstract from extracted arxiv links.
- The API offered different endpoints to get papers from tweets on a particular date, different paper categories, and containing different hashtags.

Hygiene Monitoring System for Handwash Compliance

- Developed safewash, a hand hygiene monitoring system to monitor the quality of hand washes, based on WHO Hand Hygiene Rules.
- Implemented a pub-sub design pattern using ROS, which captured the camera feed and published the frames on a topic, and a subscriber module subscribed to the frames to detect the correct hand gesture.
- Stood in top 15 at the Forge India Covid-19 Hackathon.

Unsupervised Detection of Anomalous Sounds for Machine Condition Monitoring

- Implemented a Convolutional Autoencoder network for detecting anomalies in sounds produced by machines using MIMII Dataset.
- Spectrograms were used as input and the anomaly score was calculated using the reconstruction error produced by the trained autoencoder.

Automated Grading of Essays

- Trained an LSTM network to assess and grade essay responses on a score of 1-10.
- The dataset on human graded essays was provided by the Hewlett Foundation.