

Sajal Sinha

Machine Learning Engineer

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WORK EXPERIENCE

Machine Learning Engineer

Akrivia Automation Pvt Ltd

01/2022 – Present
Startup in field of HRMS.

Visakhapatnam, India

Achievements/Tasks

- Working as a **Researcher** with a team of Machine Learning professionals.
- Built **Employee Survey Sentiment prediction** model using **Deep Learning**. Using this, we can predict the sentiment of an entire survey of any group of people within milliseconds.
- The model is built on **Transformers** and can handle questions, emojis, slang, abbreviations etc. The model gave **7% better accuracy** and **3 seconds time reduction**. Two versions were deployed, which are successfully integrated and working in the product.
- Led a team to build an **UID-Identification model**, using **transfer learning**. It is able to extract PAN, Aadhaar Number, Passport Number and Driving Licence from the respective image. Two versions were deployed, which are successfully integrated and working in the product.

PROJECTS

Online Classroom Visual Sentiment Detection.

AlmaBetter Verified Project. [🔗](#)

08/2021 – 09/2021

Tags: Deep Learning, Computer Vision, Image Preprocessing, Transfer Learning, Model Deployment

- Built an app that **detects the sentiment** of the online classroom using live video from the webcam and real-time aggregated feedback to the instructors about the class.
- Utilized fundamental picture preprocessing strategies, for example, picture augmentation, Pixel brightness transformation, and so forth to further develop picture quality for better prediction.
- Deployed quantized model on **Heroku** and **streamlit share** using streamlit API that generates sentiment of attending students aggregates the classroom overall sentiment for the feedback.
- Experimented with pre-trained models such as **DeepFace** to reduce the training time and improved accuracy, the final model built on **MT CNN** with a class average **accuracy of 90%**.

Product Recommendation Engine

AlmaBetter Verified Project [🔗](#)

08/2021 – 09/2021

Tags: Recommender Systems, Collaborative Filtering, Popularity based model, NLP, Model Deployment, Heroku, Flask

- Developed a product recommendation system for customers using **collaborative filtering** by using memory based approach..
- Used average rating of products to develop **popularity based models**, then used **surprise package** for smooth sailing of collaborative filtering model.
- Collaborative filtering model used user-based **K-means algorithm and SVD**, which is then further tuned with **GridSearchCV**.
- Used **RMSE** to evaluate the model, which gave a value of **0.8750**.
- Deployed the recommender model in **Heroku with Flask web framework** and obtained an **improvement in efficiency** of the user recommendation engine by **33%**.

TECH STACK

Languages.

Python, SQL

ML Frameworks

Scikit-learn, spaCy, Keras, Pandas, Numpy, Matplotlib, Seaborn, Flask, NLTK, spaCy, Tensorflow, PyTorch, Streamlit.

Platforms

Jupyter Notebook, Google Colab, MS Office, GitHub, Kaggle Kernel, AWS, Spyder, Excel,

COURSES

Market Analytics & Retail business management. (07/2020) [🔗](#)

Udemy

Marketing Analytics : Customer Value and Promotion Strategy. (10/2021) [🔗](#)

Udemy

Deep Learning Specialization. (09/2021 – 10/2021) [🔗](#)

Coursera

ACHIEVEMENTS

Event Head of Let's think Business – Technical Events 2020 (2020)

Python Hacker-rank Gold Batch. (2021) [🔗](#)

President, Environmental Club (2020 – 2021)

EDUCATION

B.E in Civil Engineering

DYPIEMR, Akurdi, Pune. [🔗](#)

08/2017 – 07/2021
SGPA: 7.52/10

XII – Higher Secondary.

DNC Junior College, Jalgaon [🔗](#)

2015 – 2017
63%

X – Senior Secondary

St Joseph Convent School, Jalgaon [🔗](#)

2015
CGPA: 10/10

INTERESTS

BasketBall

Cooking

Gardening