

ANANYA MALIK

Computer Science and Engineering Undergraduate, Mumbai, IN

<https://github.com/ananyamalik> | ananyamalik1999@gmail.com | <https://www.linkedin.com/in/ananyamalik/>
<https://ananyamalik.github.io/> | +917506402445

Education

Dwarkadas J. Sanghvi College of Engineering , Mumbai, IN	2017-2021
<i>Bachelors of Computer Engineering</i>	
Grade: 9.72/10	
Analysis of Algorithms, Machine Learning, Artificial Intelligence and Soft Computing, Big Data	
Pace Junior Science College, Andheri , Mumbai, IN	2015-2017
<i>Higher Secondary Certificate</i>	
Grade: 91.27%	
Major: Science and Elective: Computer Science in C	
Vasudev C. Wadhwa Arya Vidya Mandir , Mumbai, IN	2002-2015
<i>Indian Certificate of Secondary Education</i>	
Grade: 96.17%	
Elective: Computer Applications	

Skills

Web Development: Backend: MVC frameworks, Django, DRF, REST APIs, Flask, Apache Spark
Frontend: HTML, CSS, JavaScript and jQuery, Bootstrap, ReactJS
Languages/Libraries: C, C++, Python, Java, JavaScript, SQL, Numpy, Scipy, scikit-learn
Interests: Machine Learning, Deep Learning, Computer Vision, Natural Language Processing, GANs

Experience

Tata Communications Limited , Pune, IN	June 2020-August 2020
<i>Research and Project Trainee</i>	
<ul style="list-style-type: none">• Researched on techniques to interpret the fraud detection model using Call Data Records• Implemented LIME as the final solution to explain the fraudulent entries, increasing efficiency by 30%• Compiled a report on ExplainableAI and interpretability• Analysed the Call Data Records to detect patterns in call location, timing, duration using K-Means analysis, thresholding in python.	
CSRE IIT Bombay , Mumbai, IN	March 2020-June 2020
<i>Research and Development Intern</i>	
<ul style="list-style-type: none">• Created a portal to stream live data from the Remote Sensing Instrument using Flask• Displaying of the collected data into geographical graphs• Handling and Analysis of data using Apache Spark.	
Hindustan Petroleum Corporation Limited , Mumbai, IN	June 2019-July 2019
<i>Project Trainee</i>	
<ul style="list-style-type: none">• Worked on UIPath to develop a deployment process for the company code from development to production on the company's system• Development of a web portal for managing the vendors of the company using JavaServer Pages• Presented the logic to detect anomalies in temperature in the chemical plants using Machine Learning and Regression Techniques.	

Publications

A.Malik, Y. Javeri, M. Shah, R. Mangrulkar, 'Impact Analysis of Covid 19 News Headlines on Global Economy', Cyber-Physical Systems for COVID-19, Elsevier. **(In Press)**

Projects

Generation of a visual storyline from a single sentence

This project aims to develop a story from a single sentence generator and visualise the same as a sequence of compositions. This project utilizes GVTs to generate the story from a single sentence input and uses StackGANs to create photorealistic images from the sentences generated by the input. The framework contains convolutions of GVTs and corresponding stackGANs to generate this sequence. The framework has been trained on the Flintstone's dataset for video annotations to correspond text descriptions to the images

'Drishti' a Vision Depth-Sensing using SLAM

This project is developed under the Texas instrument's IIDC competition and is currently a semi-finalist for the same. We have developed a vision-based depth projecting camera module that will enable simultaneous localisation and produce a 3D map of its surroundings. Using the onboard beaglebone black we have used to accelerate the GPU and processes the images captured by the stereo camera. We have used OpenCV for camera calibration and depth perception and have used ORBSLAM2 for the 3D reconstruction and trajectory mapping.

Analysing the impact of Covid-19 on Global Economy

This project that is also compiled in a book chapter, we divulged into analysing the impact of news headlines of Covid-19 on Global Economy. Current Sentiment Analysis methods don't account for discrepancies caused due to medical jargons, hence results produced during the pandemic were optimistically positive, not matching with stock trends. We created our own dictionary that also took into account medical terminologies and applied lexicon analysis to calculating the sentiment value of each news headline in the pandemic period. We then applied regression to the sentiments and were able to predict the stock index value, based on financial history, thus analysing the global economy.

Interpreting AI: Telecom Churn data, SMS Spam Detection and Breast Cancer Predictions

I worked on a project that aimed to predict whether and why would a customer leave the telecom service. This was a multilabel classification problem for which I used SVM and XGBoost to predict the customer's position and then interpreted the reason for leaving using LIME. Also explained SMS Spam predictions. I am currently working on a project where using CNN I am predicting the nature of the tumour on images of breast cancer tissues. This prediction is then to be explained using SHAP. The aim of this project is to increase understanding predictions on medical data, to add on to dependability of such models.

Leadership and Co-curricular

DJ Unicode, Mumbai, IN

BE Mentor Core	2020-21
TE Mentor	2019-20
SE Mentor	2018-19

- Managing and Leading a 130+ member development team, Head of Social Media Department
- Mentored a group on creating a portal for patient management for a doctor clinic
- Worked as a full-stack developer for the Unicode Website

DJ ACM, Mumbai, IN

Vice Chairperson Editorial	2019-20
Editorial Head	2018-19

- Organized the LOC hackathon of 200+ participants, Internship Fair of 50+ companies and seminars by Alumni.
- Published DJ ACM 'Ecclenza Magazine' for 2019 and 2020 edition and wrote articles on 'Quantum Computing'
- Organised 'Hour of Code', introducing Computer Science to students in 10 Mumbai schools.
- Official Department Photographer

Awards and Competitions

TSEC's CodeCell Hackathon: **Second Position**

KJSCE Hacks: **Finalist, Top Female Coder**

SPIT Hackathon: **Finalist**

Economic Times Campus Stars 2019-20: **Top 100** from 49,000 engineering students nationwide.