

Ananya Malik

LinkedIn: <https://www.linkedin.com/in/ananyamalik/>

Github: <https://ananyamalik.github.io/>

Email: ananyamalik1999@gmail.com

Mobile: +1 470 753 7363

Atlanta, GA

EDUCATION

- **Georgia Institute of Technology** Atlanta, USA
Masters of Science - Computer Science- ML specialisation; GPA: 4.0 Aug 2021 - Dec 2022
Courses: Machine Learning, Deep Learning, Web Search, Data Management with ML, Deep Learning for Text, Data Visualisation
- **Dwarkadas J Sanghvi College of Engineering** Mumbai, IN
Bachelors of Engineering - Computer Engineering; GPA: 9.79 Aug 2017 - Jun 2021
Courses: Analysis of Algorithms, Machine Learning, Artificial Intelligence Soft Computing, Big Data, Software Development, OS, HMI

SKILLS SUMMARY

- **Languages:** Python, C, C++, JavaScript, SQL, JAVA
- **Frameworks:** Scikit, NLTK, SpaCy, TensorFlow, Keras, Django, Flask, NodeJS, REST API
- **Tools and Areas:** Flask, Django, ReactJS, GIT, PostgreSQL, MySQL, SQLite, AWS Lambda, AWS Athena, Linux, Web, Windows, Machine Learning, Deep Learning, Computer Vision, Natural Language Processing, GANs

EXPERIENCE

- **CLAWS Lab, Georgia Tech** Atlanta, USA
Research Engineer Aug 2022 - Present
 - **Misinformation Platform:** Currently working on building a platform to identify and interact with tweets flagged as misinformation
 - **Counter Misinformation:** Working on finding the motivation, classifying counter misinformation on Twitter
- **Amazon** Seattle, USA
Software Development Engineering Intern May 2022 - Aug 2022
 - **Build Data Debugger:** To highlight differences in the data snapshots in the various stages of production
 - **Compare Text Based Data for similarity:** Developed an algorithm to compare the attributes in a JSON data by the text values using embedding that lead to a reduction in false positives by 17 %
 - **Created Tool:** Implemented the backend on AWS Lambda, pulling data from S3 buckets and frontend on React to visualise the lineage of the data by type of data loss and attribute
- **Tata Communications Limited** Pune, IN
AI Research and Project Trainee Jun 2020 - Aug 2020
 - **Research on Fraud Detection Models:** Researched on techniques to interpret the fraud detection model using Call Data Records. Experimented and Reported the findings on ExplainableAI and interpretability of the data
 - **Explain Fraudulent Entries in Data:** Implement LIME to understand the fraudulent entries, increasing efficiency by 30%
 - **Analysis:** Analysed the Call Data Records to detect patterns incall location, timing, duration using K-Means analysis, thresholding in python

PROJECTS

- **Identifying Gender Bias in Language Models:** Studied gender bias in professions across 4 language models: BERT, GPT2, RoBERTa and T5. Prepared a common workflow by computing a gender of subject classifier that produced generalised results for all models irrespective of mask structure. Was able to identify the bias exhibited, with least bias within in the RoBERTa model
- **Synphonic: Context Aware Music Generation:** Developed a system that identifies the scene and mood from the images using the text generated from the generated image captions and maps the series of images to music. Used the CLIP Model for caption generation and BERT and LSTM network to generate the mood. Was able to produce 90% qualitative results.
- **Generation of a visual storyline from a single sentence:** Developed a pipeline to generate a story from a single sentence using GPT2 and visualised the generated story in images using StackGANs
- **Self Supervised Learning for MRI Reconstruction:** Developed a model agnostic framework to utilise masked and under sampled MRI images, and reconstruct them using a 4 layer U Net network, to produce images that match the quality of fully supervised methods
- **Unicode Website and Doctor Clinic Management Portal:** Developed an event management and student management system to aid the committee's day to day operations. Developed a clinic management portal that allowed a doctor to handle and manage patients in the clinic. Also provided solutions for file management

PUBLICATIONS

- **Paper:** Successive Image Generation from a Single Sentence, Amogh Parab, Ananya Malik, Arish Damania, Arnav Parekhji, Pranit Bari, ITM Web Conf. 40 03017 (2021), DOI: 10.1051/itmconf/20214003017.
- **Chapter:** 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.

RESEARCH AND TEACHING

- **TA: CS 3600 Intro to AI** Atlanta, USA
TA to Prof James Rehg. Held office hours, recitations, review sessions and graded papers Jan 2022 - Dec 2022
- **DJ Unicode** Mumbai, IN
Managing and Leading a 130+ member development team and worked as a full stack developer Jul 2018 - May 2021