Aalisha Dalal



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Experience

Google Inc., Software Engineer, Machine Learning

Mountain View, CA; Oct 2021 - Current

- Work in the Play Abuse detection team in Android App safety for automating reviews and enforcement for various permission & privacy policies. Launched 3+ E2E workflows in these domain through XFN collaborations with Legal & Operations in permissions in which 50K _app submissions were human reviewed with 9.8K automations and 13K app submissions rejections in permissions.
- Developed LLM-based app functionality app framework for permission policies which would be used for automation based on core app functionality for <u>RQIP</u> & <u>Package Visibility</u>. This will save ~45% review volume based on offline batch runs.
- Working on a permission consolidation framework in C++ for 10+ permission policies that would be used for automation & enforcement and would significantly reduce agent review time by dynamic review setup & easily onboard new policy.
- Worked with Wei Li on LLM-assisted privacy doc reviews and automation which increased automation rate from 59% to 73% for incoming volume of 7K app submissions/ day. Previously, included SDK signals for privacy policies which increased daily enforcement by 36% and saving ~10K hours of human review time.

Shrimad Rajchandra Mission, Volunteer as AI Researcher

June 2022 - Current

- Collaborating within a small team to develop a hybrid search RAG engine for wisdom discovery, utilizing Voyage AI embeddings to recommend concise clips from spiritual discourses. This engine addresses user queries through innovative smart chunking methodologies.
- Engaged in the evaluation and fine-tuning of cutting-edge Automatic Speech Recognition (ASR) models for low-resource Indic languages, specifically Hindi and Gujarati. This involved refining speech-to-text translation capabilities to enhance accessibility for speakers of these languages.
- <u>Conducted</u> evaluations and fine-tuning of various Text-to-Speech (TTS) models to accurately replicate the voice of a spiritual master in English, thereby broadening accessibility for a diverse audience.

Adobe Inc, Machine Learning Engineer

July 2020 - July 2021

- Developed and deployed ML-based ranker using AI engine for style-based recommendations of user photos.
- Built data pipelines using Hadoop, AWS, and Spark to analyse billions of user assets for training ML models.
- Carried out user-behavioral studies for search and recommendation use cases for Creative Cloud (CC) Products.
- Organized ML Reading Group and received "Most Likely to Be Neural Filter" Award in org-wide hackathon.

Machine Learning Applied Search Intern

June 2019 - Sep 2019

- Generated personalised search keyword recommendation queries based on user photos in Adobe Lightroom.
- · Automated categorisation of user photos in albums using an unsupervised embedded topic modeling approach.

University of California Los Angeles, Graduate Student Researcher

Sep 2019 - June 2020

Computational Machine Learning Lab: Worked on a framework to generate adversarial examples that can fool any kind of object detection models using black-box query limited Sign-OPT attack under the guidance of Prof. Hsieh.

UCLA Vision Lab: Worked on Siamese Network based models with deep cross correlation and attentional features for video instance segmentation with PhD student Xinzhu Bei and Prof. Stefano Soatto.

Education

University of California, Los Angeles

Master of Science in Computer Science; GPA: 3.88

Sep 2018 - June 2020

Relevant Coursework: Computer Vision (F. Scalzo & A.Kadambi), Pattern Recognition(S. Zhu), Machine Learning(Q. Gu), Deep Learning, (J.Kao), Convex Optimization (L.Vandenberghe), Natural Language Processing & Web Info Systems (J. Cho)

Dhirubhai Ambani Institute of Information and Communication Technology (DA-IICT), India

2014 - 2018

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Technical Skills

Languages: C++ with ML, Java, Python, C

Platform/Framework: Pytorch, TensorFlow, CUDA, AWS, Spark, Java-Spring Framework

Data Stores: SQL, Weaviate, ElasticSearch, Hadoop Web technologies: Streamlit, HTML, CSS, REST API

Soft Skills

- · Problem solving
- Inquistiveness
- Attention to detail
- · System Design
- XFN collaborations

Internships

Infocusp Innovation Pvt. Ltd., Machine Learning Intern

Ahmedabad, India; Jan - May 2018

- Worked on data analysis cycle for financial modelling of stock market feed to create profitable stock market strategies.
- Carried out statistical wiki-data analysis to see if there are event indicators that reflect change in stock prices.

Morgan Stanley, Technology Analyst

Mumbai, India; May - July 2017

- Worked as a part of Institutional Securities Team and developed a full-stack, health-check application similar to the GSuite Dashboard using Java-Spring framework
- This would monitor failure events of various functionalities for their different trading applications.

Projects

Automated Colorisation of Grayscale Images: Implemented a CNN encoder-decoder architecture and GAN model having U-Net as the generator and CNN as the discriminator for colorisation of grayscale images.

- · Analysis and Detection of Human Faces: Implemented Viola Jones' Adaboost and RealBoost method for face detection based on non-maximum suppression and hard negative mining to reduce false-positive detections. For face analysis used PCA and auto-encoder CNN model on human faces and used them to reconstruct human faces with geometric variations.
- · Neural-based System for Question-Answering on SQUAD 2.0: Worked on a Bidirectional Attention flow model using word embeddings GloVe, Fast-text and BERT for predicting answers to questions from paragraphs.
- Hashtag Recommendation for Twitter tweets: Developed a model for recommending hashtags for user tweets. It is trained on the real-time Twitter feed and is built using word2vec embeddings and clustering approaches.

Volunteering

- Working on ground study research for NGO efforts in Tanzania & Angola as a part of Mission Africa outreach
- Managed social media accounts for an NGO, promoting their work and outreach initiatives through engaging content and posts.
- Actively volunteered in their fundraising efforts for constructing an Animal hospital, Highway cleaning, bagels
 donation, covid mask distribution, school backpack donation, making PBJ lunch bags for the less fortunate ones in Bay
 area, etc.