SARTHAK ARORA

Computer Vision, Climate Science, Remote Sensing | sarthakvarora.github.io

EDUCATION

PLAKSHA UNIVERSITY   Chandigarh, India
Post Graduate Diploma   2021 – 2022
Major in Computer Science   CGPA: 3.88/4.0; Department Rank 2
Relevant Coursework: Machine Learning; Computer Vision; Reinforcement Learning; GraphML

RAMJAS COLLEGE, DELHI UNIVERSITY   New Delhi, India
Bachelor of Science   2015 – 2018
Major in Statistics; Minors in Economics   CGPA: 7.176/10.0; First Division
Relevant Coursework: Actuarial Sciences; Time-Series Analysis; Statistical Modelling; Hypothesis Testing

PUBLICATIONS

[Queer In AI: A Case Study in Community-Led Participatory AI](#) - FAccT'23 **Won best paper* 🏆
Sarthak Arora, Organizers of Queer in AI

[Queer in AI](#) - ACM'22
Hetvi Jethwani, Arjun Subramonian, William Agnew, MaryLena Bleile, **Sarthak Arora**, Maria Ryskina, Jeffrey Xiong

RESEARCH EXPERIENCE

WUUII INC.   Remote
ML Engineer   Jun 2024 – Present
- Utilizing a double-encoder double-decoder Vision Transformer model to create a shared latent space between streetview and aerial data to identify features across modalities with enhanced geolocation.
- Fine-tuned Segment Anything on streetview imagery and translated the identified features onto an aerial map to integrate polygon features and depth information for improved Wildfire Risk Assessment.
- Representing the spread of wildfires using a Graph Attention Network model to understand factors that facilitate fire propagation and inform preventive strategies.

COLLABORATIVE EARTH   Remote
ML Engineer   Jan 2023 – Present
- Using Computer Vision and GEE to identify and cluster "Naalas" for the Ganges river from Satellite Images.
- Used GIS Tools and datasets to create a comprehensive site suitability map for Coastal Forests Wetlands Lab.
- Conducted fieldwork around the Ganges River which involved drone surveys and meeting stakeholders.
- Leading fundraising efforts for the Ganges Lab, finalists for the [Frontier](#) CDR Prepurchase 2024.

UNIVERSITY OF CALIFORNIA, BERKELEY   Remote
Research Scientist   Sep 2022 – Present
- Conducting a time-series Anomaly Detection of Power Plant Emissions to find areas of policy improvement.
- Analyzed Quantitative and Qualitative Regressors for a Wildfire Survey conducted by [MWPA](#).

UNIVERSITY OF CALIFORNIA, BERKELEY   Berkeley, CA
Research Scholar   Apr 2022 – Jul 2022
- Conducted Research to develop a wildfire risk assessment tool under the mentorship of Dr. Thomas Azwell.
- Worked on Remote Sensing datasets for the state of California to predict wildfires with an accuracy of **82%**.

AI FOR GOOD FOUNDATION   Remote
ML Engineer   Feb 2022 – Feb 2024
- Worked on the Climate SDG project, backed by the UN Development Program and was presented at COP28.
- Created a Graph based Visualisation for Climate Entities using Named Entity Recognition and Neo4J.
- Cleaned Scraped data using LDA for topic modeling, leading to a Recall value of **83.5%** in noise detection.

QUEER IN AI Remote
Organizer Jan 2022 – Present
- **Program Chair** for the Queer in AI Workshop at **NeurIPS** for the years 2022-2024.
- Conducting and publishing research to raise awareness of queer issues in the general AI community.
- Working on the Graduate Application Aid program, aimed at supporting queer applicants through funding and mentorship, led to scholarships worth **$130,000** awarded to **130+** applicants across **30** countries.

INDUSTRY EXPERIENCE

Eirene AI Remote
ML Engineer Jul - Sep 2024
- Fine-tuned RT-DETR to detect fire and smoke in real-time, to be deployed on-edge on CCTV cameras.

PREDLI AB Remote
ML Engineer Sep 2023 – Feb 2024, May - June 2024
- Improved LLM Performance on a Tweet generator using a RLHF model based on Tweet engagement by 10pp.
- Created a Machine Learning Model trained on Geophysical Layers such as Bedrock, Magnetism, Resistivity, Gravity and Satellite Imagery for Mineral Site Prediction in Sweden with an accuracy of 89%.

INDIFI TECHNOLOGIES Gurgaon, India
Data Scientist Aug 2022 – Jul 2023
- Created a model which predicts Default Risk with 96% precision by analyzing CIBIL Trend using LSTM.
- Used Fuzzy Logic to match addresses for verification, leading to a reduction in manual checks by ~4 hours.

PROJECTS

- Created a real-time face and facial-features detector on live videos using **HAAR** and **CNN.**
- Created a Machine Learning model for Drug Discovery using **GANs**.
- Created an Image Classification model using transfer learning on **VGG-16**.
- Co-developed a business plan to model physiological indicators and provide actionable health insights.

TALKS AND COURSES

- Delivered a talk on "South Asian Feminism/s in the 21st Century" at **ICML 2022**.
- Completed the Hilary 2024 School of Climate Change course offered by **Oxford Climate Society**.
- Completed the **Climate Change AI** Summer School 2024.
- Co-wrote a Literature Survey paper on **Sarcasm Detection in NLP** and presented it at **NAACL 2024.**
- Moderated a Panel at **NeurIPS 2022** on **Immigration and Queerness** as a part of the Queer in AI Workshop.

TEACHING

- Taught subjects such as ML, Research, and Leadership to students based out of Africa with **Belong.**
- **Teaching Assistant** for the Economics Courses at Ramjas College, Delhi University.

ACHIEVEMENTS

- Silver Medalist for academic excellence at Plaksha University, TLP Batch of 2022.
- Winning Team for the Plaksha Entrepreneurial Challenge Lab where we pitched a Mental Health startup.

ADDITIONAL INFORMATION

Actuarial Papers Cleared	CT1 (Financial Mathematics), CT3 (Probability and Mathematical Statistics), CT4 (Models), CT5 (Contingencies), CT6 (Statistical Methods)