Aatman Vaidya

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Education

Jul 2023Ahmedabad UniversityAhmedabad, IndiaAug 2019B.Tech in Computer Science & Engineering (CSE)

Thesis: Modelling the spread of Hate Speech on Twitter | Advisors: Prof. Amit Nanavati, Dr. Seema Nagar

Experience

Present | Tattle Civic Tech [♥]

Aug 2023 | Software Development Engineer - I and Data Engineer | Advisors: Tarunima Prabhakar, Denny George

→ I help build citizen centric open-source tools and datasets to understand and respond to **inaccurate** and **harmful**

content.

→ I help build a browser extension Uli, that redact's slurs and abusive content, archive's problematic content, and collectively pushes back against **online gender-based violence**. Uli de-normalizes everyday violence that people of marginalized genders experience online in India. [O] [Media Coverage: UNFPA Report]

→ I lead the development of Feluda, a configurable engine for analyzing multilingual and multimodal content. Feluda helps fact-checkers and researchers in combating misinformation. [O] [%] [Media Coverage: UNDP]

→ Feluda is being used as the back-end analysis engine on a national Deepfake detection **WhatsApp helpline** (Deepfakes Analysis Unit) by the Misinformation Combat Alliance for <u>2024 Indian Lok Sabha elections</u>. This helpline is funded by Meta. [Media Coverage: Nieman Lab | The Hindu | World Economic Forum | Meta]

 \rightarrow I build data pipelines to cluster large amount's of Audio and Video data into social media thematic labels like politics, humor, memes, devotional content etc. This work helps fact-checker's better understand, vizualize and analyze the content received on their helpline.

→ Worked with MLCommons to develop an AI safety benchmark dataset for hate and sex related crimes. As a part of this project, I also conducted a survey on evaluating Indic LLM's for natural language tasks and online harms. Dataset | Report |

May 2022 │ Ahmedabad University [�]

Ahmedabad, India

Remote

May 2021 Undergraduate Research Fellow | Advisors: Prof. Shilpa Pandit, Prof. Keyur Joshi

<u>Projects:</u> Analysing people's psychological and physiological effects and experiences in the second wave of COVID-19, Perceivable Image Blur Quality Index

Publications

S=In Submission, C=Conference, W=Workshop, P=Preprints, J=Journal

[S.2] Improving Content Moderation for Indian Languages using Related Tasks

<u>Aatman Vaidya</u>, Dipankar Srirag, Aditya Joshi [*In preparation*]

[S.1] Strategies to Mitigate Spread of Toxicity on a Social Network

<u>Aatman Vaidya</u>, Harsh Bhagat, Seema Nagar, Amit Nanavati [In preparation]

[P.1] Analysis of Indic Language Capabilities in LLMs Aatman Vaidya, Tarunima Prabhakar, Denny George, Swair Shah Report Submitted to MLCommons [%]

Arnav Arora, Maha Jinadoss, Cheshta Arora, Denny George, Brindaalakshmi...<u>Aatman Vaidya</u>, Tarunima Prabhakar Workshop on Online Abuse and Harms at North American Chapter of the Association for Computational Linguistics

★ Outstanding Paper Award

[NAACL'24]

[C.3] Analysing the Spread of Toxicity on Twitter \square

<u>Aatman Vaidya</u>, Seema Nagar, Amit Nanavati ACM International Conference on Data Science and Management of Data

[CODS-COMAD'24]

[C.2] Forecasting the Spread of Toxicity on Twitter Aatman Vaidya, Seema Nagar, Amit Nanavati

IEEE International Conference on Cognitive Machine Intelligence

[IEEE CogMI'23]

[C.1] Overview of the 2023 ICON Shared Task on Gendered Abuse Detection in Indic Languages

<u>Aatman Vaidya</u>, Arnav Arora, Aditya Joshi, Tarunima Prabhakar International Conference on Natural Language Processing

[ICON'23]

Talks

"Modelling Hate Speech on a Social Network"

> Social Network Analysis Class (CSE533) Invited Speaker [%] Apr'24 (Ahmedabad University, India)

"Building NLP classifiers to detect Hate Speech"

> ACM Winter School on Network Science Invited Speaker Dec'23 (Ahmedabad University, India)

"Tools to respond to Online Gender Based Violence"

> Digital Citizen Summit Invited Speaker Nov'23 (Remote)

Achievements

Bosch Future Mobility Challenge | Semi-Finalist [♀] Programmed and Engineered an autonomous driving car to navigate a miniature city. One of the 24 teams out of 118, and only team to represent India for the finals in Cluj, Romania. [] [➡]

Outstanding Paper Award Workshop on Online Abuse and Harms at NAACL'24

Ingenious Hackathon 3.0 | Winner Open Source Track

Academic Service

Shared Task Organiser ICON'23 (Gendered Abuse Detection in Indic Languages) [%]

Reviewer ACL Rolling Review'24

Teaching and Leadership Roles

Discrete Mathematics (MAT 101), Ahmedabad University Teaching Assistant

Nov'22 - Mar'23

> Responsibilities included evaluating assignments, and helping students with the coursework.

Center for Learning and Empowerment (NGO) Volunteer Teacher [❖]

Jul'23 - Apr'23

> Taught 20+ secondary school kids mathematics for an entire academic year, at a tribal village in Jharkhand, India.

Reading Group, Ahmedabad University Organiser []

Dec'21 - May'22

> Organized a weekly Reading Group focused on reading recent and classical papers in Computer Science.

Programming Club, Ahmedabad University Content Head and Event Organiser [♠]

Jul'20 - May'22

> Co-organized and curated events around Web Development, Machine Learning and Competitive Programming.

Google Android Study Jams Facilitator Instructor [■] [�]

Dec'21 - Jan'22

> Conducted 3 sessions teaching Android Development in Kotlin to 40+ students.

Usable Pasts, Sustainable Futures Student Volunteer [❷] [■]

Ian'23

> Worked under Dr. Tejaswini Niranjana to understand how historically effective practices around Food, Clothing and Housing (roti-kapda-makan) can help mitigate climate change and public health issues.

Skills

Research Areas Languages

Databases and Developer Tools

Online Safety, Evaluation, Language Models & their Societal Impact, Content Moderation Python, JavaScript, Elixir C/C++, Kotlin, GraphQL

Frameworks/ Libraries PyTorc

PyTorch, Tensorflow, Nodejs, OpenCV, networkx, CameraX, Elasticsearch, Sequelize MySQL, PostgreSQL, Docker, AWS (S3, EKS, EC2), aws-cli, Kubernetes (kubectl), CI/CD,

Android Studio, Firebase