

Aatman Vaidya



SDE | Tattle Civic Tech

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Education






Jul 2023 Aug 2019	Ahmedabad University B.Tech in Computer Science & Engineering (CSE), GPA: 2.87/4	Ahmedabad, India
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Experience

Present Aug 2023	Tattle Civic Tech  Software Developer Engineer - I and Data Engineer Advisors: Tarunima Prabhakar , Denny George Building Open Source tools and datasets to understand and respond to <u>inaccurate</u> and <u>harmful</u> content. Projects: Uli → Browser extension that redact's slurs and abusive content, archive's problematic content, and collectively pushes back against online gender based violence, Feluda → Configurable Engine for analysing multi-lingual and multi-modal content. Feluda helps fact-checker's in combating misinformation. → Feluda is being used as the back-end analysis engine on a national deepfake WhatsApp helpline (Deepfakes Analysis Unit) by the Misinformation Combat Alliance for 2024 Indian Lok Sabha elections . This helpline is funded by Meta. [Media: Mashable The Hindu Meta Press Release]	Delhi, India
May 2022 May 2021	Ahmedabad University  Undergraduate Research Fellow Advisors: Prof. Shilpa Pandit , Prof. Keyur Joshi Projects: Analysing people's psychological and physiological effects and experiences in the second wave of COVID-19, Perceivable Image Blur Quality Index	Ahmedabad, India

Publications

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

- [C.3] **Analysing the Spread of Toxicity on Twitter** 
[Aatman Vaidya](#), Seema Nagar, Amit Nanavati
ACM International Conference on Data Science and Management of Data [CODS-COMAD'24]
- [S.1] **The Uli Dataset: An Exercise in Experience Led Annotation of oGBV** 
Arnav Arora, Maha Jinadoss, Cheshta Arora, Denny George, ..., [Aatman Vaidya](#), Tarunima Prabhakar
In Submission at Workshop on Online Abuse and Harms, NAACL
- [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** 
[Aatman Vaidya](#), Arnav Arora, Aditya Joshi, Tarunima Prabhakar
International Conference on Natural Language Processing [ICON'23]
- [J.1] **Coping Resources of Young People Experiencing COVID-19 Second Wave in India: A Preliminary Study** 
Shilpa Pandit, [Aatman Vaidya](#), Aangi Shah, Eshva Shah, ..., Isha Iyer
Journal of Psychosocial Research [JPR'2022]

Select Research Projects

- Modelling Spread of Hate Speech** Aug'22 - Present
Advisors: [Dr. Amit Nanavati](#), [Dr. Seema Nagar](#)
- Worked on a novel model to capture the spread of hate speech on Twitter. Our model is based on user behaviour and captures two important factors: a) toxicity exists as a spectrum, i.e. hate is not binary, and b) toxicity is not conserved in a network. [Full Paper@CODS-COMAD'24]
 - We extended this work by studying toxicity as a time series and forecasted it using transformer-based models and graph CNNs. While network structure matters, we found that explicit connections may not always imply influence. [Full Paper@IEEE CogMI'23]
 - An in-depth empirical analysis led us to find users change behaviour with time. Developing a model that captures this finer phenomenon gives us better insights into creating strategies to mitigate hate speech. [In Submission]

- > Created a YouTube [Dataset](#) to track gender-based violence using a crowd-sourced slur list. Used string matching algorithms and NLP models for Indic languages to analyse text. [\[🔗\]](#)

Talks

“Modelling Hate Speech on a Social Network”

- > Social Network Analysis Class (CSE533) *Invited Guest Lecturer* [\[🔗\]](#)

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. [\[📺\]](#) [\[📺\]](#)

Ingenious Hackathon 3.0 | Winner Open Source Track

CODS-COMAD'24 Travel Grant For attending CODS-COMAD'24 at Bangalore, India

Academic Service

Shared Task Organiser ICON'20 (Gendered Abuse Detection in Indic Languages) [🔗](#)

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 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* [\[🔗\]](#)

Jul'20 - 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.

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* [\[🔗\]](#) [\[📺\]](#) [\[📺\]](#)

Jan'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

Languages	Python, JavaScript, C/C++, Kotlin, GraphQL
Frameworks/ Libraries	PyTorch, Tensorflow, Nodejs, OpenCV, networkx, CameraX, Elasticsearch, Sequelize
Databases and Developer Tools	MySQL, PostgreSQL, Docker, AWS (S3, EKS, EC2), aws-cli, Kubernetes (kubect), CI/CD, Android Studio, Firebase

Software and Open Source Contributions

- > **Tattle Civic Tech:** Feluda - [git](#), Uli - [git](#)