

Aatman Vaidya

SDE | Tattle Civic Tech

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Education

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

Experience

Present | **Tattle Civic Tech** [\[📄\]](#) **Delhi, India**
Aug 2023 | Software Developer Engineer - I and Data Engineer / Advisors: [Tarunima Prabhakar](#), [Denny George](#)
→ Building Open Source tools and datasets to understand and respond to **inaccurate** and **harmful** 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**. [\[📄\]](#)
→ Uli de-normalizes everyday violence that people of **marginalized genders** experience online in India.
Feluda → Configurable Engine for analysing **multilingual** and **multimodal** content. Feluda helps fact-checkers in combating **misinformation**.
→ 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 **2024 Indian Lok Sabha elections**. This helpline is funded by Meta. [\[Media Coverage: Mashable | The Hindu | Meta Press Release\]](#)

May 2022 | **Ahmedabad University** [\[📄\]](#) **Ahmedabad, India**
May 2021 | 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

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. String matching algorithms and NLP models were used to analyse text in Indic languages. [\[🔗\]](#)

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'23 (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 (kubectrl), CI/CD, Android Studio, Firebase

Software and Open Source Contributions

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