

# Aatman Vaidya

SDE | Tattle Civic Tech

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[github.com/aatmanvaidya](https://github.com/aatmanvaidya)

[Google Scholar](#)

## 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	<b>Tattle Civic Tech</b>  Software Developer Engineer - I and Data Engineer   Advisors: <a href="#">Tarunima Prabhakar</a> , <a href="#">Denny George</a> Building Open Source tools and datasets to understand and respond to <u>inaccurate</u> and <u>harmful</u> content. Projects: <a href="#">Uli (git)</a> → Browser extension that redact's slurs and abusive content, archive's problematic content, and collectively pushes back against online gender based violence, <a href="#">Feluda (git)</a> → 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 ( <a href="#">Deep-fakes Analysis Unit</a> ) by the <a href="#">Misinformation Combat Alliance</a> for <a href="#">2024 Indian Lok Sabha elections</a> . This helpline is funded by Meta. [ <a href="#">Media: Mashable</a>   <a href="#">Quint</a>   <a href="#">Meta Press Release</a> ]	Delhi, India
May 2022 May 2021	<b>Ahmedabad University</b>  Undergraduate Research Fellow   Advisors: <a href="#">Prof. Shilpa Pandit</a> , Prof. Keyur Joshi Projects: Analysing eople'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

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

## Software and Open Source Contributions

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