

Soham De

CURRICULUM VITAE

www.sohamde.in

☎ (+91) 8334866640 | ✉ actuallysoham@gmail.com | 🐦 @actuallysoham

EDUCATION

University of Washington

PHD IN INFORMATION SCIENCE

- Admitted with UW Graduate School Top Scholar Fellowship

Seattle, USA

Sep 2023 - 2028 (exp)

Ashoka University

DIPASR (ASHOKA SCHOLARS PROGRAM) IN COMPUTER SCIENCE

- Graduated Magna cum Laude with the Best Capstone Thesis Award

Sonepat, India

Aug 2022 - May 2023

BSc (HONS) IN COMPUTER SCIENCE | 3.89/4.0

- Graduated Magna cum Laude with a Gold Medal in Computer Science

Aug 2019 - May 2022

Delhi Public School, Ruby Park

HIGH SCHOOL DIPLOMA | 95%

- Graduated in 2019 (AISSCE)

Kolkata, India

Aug 2017 - May 2019

WORK EXPERIENCE

Microsoft Research

RESEARCH INTERN

- Studying quantitative characteristics of propaganda networks in real-life social networks
- Used a mix of statistical analysis and qualitative interviews to study disinformation and effectiveness of fact-checks

Bangalore, India

Jul. 2022 - Dec. 2022

University of Michigan

RESEARCH INTERN

- Analysing nature of interactions, polarization, and discourse among political influencers on Indian Twitter
- Actively using word embeddings, PCA, LDA, regression, clustering, and tools like Gephi in research

Remote

Dec. 2021 - Jun. 2022

Pint AI (formerly Mediacred)

ML RESEARCH INTERN

- Conducted exploratory research into ML interventions for fake-news detection
- Worked on Credibly - Mediacred's flagship news credibility analyser
- Implemented a novel Twitter-based article recommendation engine that generates a curated news feed in $\mathcal{O}(1)$ time

Bangalore, India

May. 2021 - Oct. 2021

MPhasis Lab (ML2CT)

RESEARCH INTERN

- Implemented end-to-end PPML systems in C++ and Python on multiple large datasets
- Designed a novel algorithm for securely evaluating non-linear functions using arithmetic shares

Sonepat, India

May. 2021 - Aug. 2021

Ashoka University

2X UNDERGRADUATE TEACHING ASSISTANT

- TA for FC-0309 (Foundations of Computer Programming) and CS-1216 (Computer Organisation and Systems)
- Conducted weekly discussion sections and office hours. Was responsible for designing and evaluating assignments as well as conducting the Puzzle Day event
- Student feedback: 4.75/5.0 (180+ enrolled students)

Sonepat, India

Fall 2020, Fall 2021

RESEARCH EXPERIENCE

IN PROGRESS/ IN SUBMISSION

[9] Towards defining and quantifying Twitter formality

SOHAM DE, ANIRBAN SEN, MONOJIT CHOUDHURY, JOYOJEET PAL, DEBAYAN GUPTA

In Progress

- Conducting a global survey to arrive at a definition of perceived formality of text on Twitter
- Using various linguistic features and state-of-the-art language models to quantify formality and study its applications in corporate communication, propaganda and discourse

[8] The Troll's Toolkit: A mixed-methods study on how journalists are trolled on Twitter

SOHAM DE*, SUKHNIDH KAUR*, JOYOJEET PAL

under revision

- Studied trolling of journalists on Twitter using large-scale analysis of their tweets and responses received on them along with quantitative interviews of 20+ highly-visible journalists in India

[7] Trends in Online Propaganda: A Comparative Study

ANIRBAN SEN, SOHAM DE, JOYOJEET PAL

in submission

- Compared quantitative features of 3 different socio-political events of varying levels of propagandist content on Indian Twitter

[6] Hierarchical Association, Harmonized Aggravation, and Hashtag Assemblies: A Dogma Community keeping its Twitter Candle Lit

ANIRBAN SEN, SOHAM DE, JOYOJEET PAL

in submission

- Studied methods of sustaining discourse around rumors and conspiracy theories on social media
- Quantitatively explored formations of de-facto hierarchies within such communities

[5] Catch, Corroborate and Communicate: The Contours of Professional fact-Checking In India

ARSHIA AARYA, SOHAM DE, SALONI DASH, JOYOJEET PAL

under revision

- Studied mechanisms of professional fact-checking and the effectiveness of online dissemination using network analysis and qualitative interviews of prominent fact-checkers

CONFERENCE PUBLICATIONS & POSTERS

[4] Experiences of Indian Journalists on Twitter in India (*Best Poster Award*)

ACM SIGCHI HCI & Friends 2022

SOHAM DE*, SUKHNIDH KAUR*, JOYOJEET PAL

[\[Link to poster\]](#)

- Poster on qualitative experiences of journalists online - including a description of troll networks, mechanisms of trolling and reactions of journalists to cope with such attacks

[3] Closed Ranks: The Discursive Value of Military Support for Indian Politicians on Social Media

ICTD 2022

AGRIMA SETH*, SOHAM DE*, ARSHIA AARYA, SUSHANT SINGH, STEVEN WILKINSON, JOYOJEET PAL

[\[Link to pdf\]](#)

- Studied institutional capture of defense accounts by politicians and the nature of their interactions using network analysis

[2] Note: Picking Sides: The #HijabBan discourse on Twitter

ACM COMPASS 2022

SOHAM DE, ANMOL PANDA, JOYOJEET PAL

[\[Link to pdf\]](#)

- Short paper on narratives and themes in the #HijabBan debate on Twitter using multilingual word embeddings and unsupervised hierarchical clustering

[1] DISMISS: Database of Indian Social Media Influencers on Twitter

AAAI ICWSM 2022

ARSHIA AARYA*, SOHAM DE*, DIBYENDU MISHRA*, GAZAL SHEKHAWAT*, ANKUR SHARMA, ANMOL PANDA, FAISAL LALANI,

PARANTAK SINGH, RAMARAVIND KOMMIYA MOTHILAL, RYNAA GROVER, SACHITA NISHAL, SALONI DASH, SHEHLA SHORA, SYEDA

ZAINAB AKBAR, JOYOJEET PAL

[\[Link to pdf\]](#)

- DISMISS is the largest sample of social media influencers on Twitter, curated using snowball sampling in conjunction with various robustness checks

MEDIA ARTICLES

[M2] Who are BJP's favorite journalists? What about Congress and AAP? A Michigan study reveals

Newslaundry

SOHAM DE, JOYOJEET PAL

Nov 2022

[M1] Coordinated campaign? India #1 source for pro-Russia tweets amid Ukraine war, says Ashoka study

The Print & The FinePrint

REGINA MIHINDUKULASURIYA, SOHAM DE (CANDID)

May 2022

MISCELLANEOUS/ PRIOR RESEARCH

Privacy Preserving Machine Learning

ML2CT

SOHAM DE*, KUBER SHAHI*, SUBHASHIS BANERJEE, MAHAVIR JHAWAR

May. 2021 - Aug. 2021

- Implemented various PPML frameworks (such as SecureML and BLAZE) from scratch in C++
- Designed and implemented a novel protocol for securely evaluating non-linear activation functions (such as the sigmoid) using arithmetic circuits in a constant field-size

Alternative Approaches for Modelling COVID-19: High-Accuracy Low-Data Predictions

medRxiv

DEWANG KUMAR AGARWAL*, **SOHAM DE***, OJAS SHUKLA, ARCHIT CHECKER, APOORVI MITTAL, ANKITA BORAH, DEBAYAN GUPTA

Jul. 2020

- Analysed COVID-19 data using novel curve-fitting and ML-based techniques to make low data-reliant predictions in R and Python

BHARATSIM

Thoughtworks

ADIT SHAH*, **SOHAM DE***, GAUTAM MENON, DEBAYAN GUPTA

Jun. 2020

- Implemented ETL pipelines and synthetically replicated the Indian population using GANs
- Also added polygon-based querying on the synthetic population in $\mathcal{O}(n \log n)$ by optimising function calls for the visualisation engine

* means equal contribution

HONORS & AWARDS

- 2023 **Best Capstone Thesis Award**, Department of Computer Science, Ashoka University
- 2023 **UW Graduate School Top Scholar Fellowship**, University of Washington
- 2022 **Gold Medallist**, Department of Computer Science, Ashoka University
- 2022 **Undergraduate Research Excellence Award**, Department of Computer Science, Ashoka University
- 2022 **Service Excellence Award**, Department of Computer Science, Ashoka University
- 2022 **Recognition for Outstanding Contribution**, Department of Computer Science, Ashoka University
- 2019-22 **Dean's List (every semester)**, Dean of Academic Affairs, Ashoka University
- 2017 **National Finalist**, ICPC for Schools
- 2017 **All India Rank 7**, ICSE Board Exams

OTHER ACTIVITIES

Social Media and Society Conference 2023

University of Michigan

STUDENT ORGANISER

Apr. 2023

- Organising the call for papers, poster presentation session, and guest invites for an upcoming conference

ACM CSCW 2022

Virtual

STUDENT VOLUNTEER AND REVIEWER

Nov. 2022

- Reviewed manuscripts and currently volunteering for the virtual CSCW conference on Nov 8-12, 2022

The CrossThink Journal

Ashoka University

GENERAL CHAIR

Aug. 2022 - present

- Started Ashoka's first (and only) interdisciplinary CS Journal with a team of 12 student reviewers

CANDID Research Group

Ashoka University

FOUNDER AND STAFF RESEARCHER

Apr. 2022 - present

- Started and helped secure funding for a new CS research group at Ashoka for Analysis on Social Networks

Academic Affairs Board

Ashoka University

CS REPRESENTATIVE

Fall 2021, Spring 2021

- Worked with the Department of Computer Science, Ministry of Academic Affairs (SG) and the Academic Advisory Board

The CS Society

Ashoka University

INTERIM PRESIDENT, HEAD OF DEVELOPMENT

Feb. 2020 - Jun. 2022

- Conducted bi-weekly Workshops and Events for 70+ active members on Development and Machine Learning

WiCS Research Reading Group

Ashoka University

MEMBER, PRESENTER

Aug. 2020 - Jun. 2022

- Presented multiple ML papers (from NIPS, ICLR, PRML etc) to senior undergraduate and Ph.D. Students at Ashoka University

SKILLS

Programming	Python, C/C++, JavaScript, \LaTeX , R, Markdown, Assembly, SQL
Frameworks	React, Express, Flask, git, Keras, Tensorflow, OpenCV
Softwares	Gephi, NetworkX, Tableau, Atlas.ti, MS Excel
Languages	English, Bengali, Hindi

REFERENCES

JOYOJEET PAL
DEBAYAN GUPTA
ANIRBAN SEN
MAHAVIR JHAWAR

JOYOJEET@UMICH.EDU
DEBAYAN.GUPTA@ASHOKA.EDU.IN
T-ANIRBANSEN@MICROSOFT.COM
MAHAVIR.JHAWAR@ASHOKA.EDU.IN

Advisor and collaborator on multiple studies
Capstone project/thesis advisor at Ashoka University
Advisor and collaborator at Microsoft Research, India
Research advisor at ML2CT, Ashoka University