

Soham De

CURRICULUM VITAE

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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

Aug 2019 - May 2022

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

WORK EXPERIENCE

University of Washington

GRADUATE TEACHING ASSISTANT

- TA for IMT 573 (Data Science I)
- Responsibilities include grading, conducting Office Hours and weekly Lab sessions for 40 students

Seattle, USA

Oct. 20223 - present

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

ACADEMIC PUBLICATIONS

[5] Social Media & Society in India

SOHAM DE, ARSHIA ARYA, DIVYA RAMESH, MEG YOUNG, JOYOJEET PAL

- Co-authored proceedings and chaired a workshop session at the Social Media and Society in India Conference 2023 held at the University of Michigan

University of Michigan 2023

[Link to proceedings]

[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 ARYA, 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 ARYA*, SOHAM DE*, DIBYENDU MISHRA*, GAZAL SHEKHAWAT*, ANKUR SHARMA, ANMOL PANDA, FAISAL LALANI,

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

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

ZAINAB AKBAR, JOYOJEET PAL

- 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 **UW Graduate School Top Scholar Fellowship**, University of Washington
- 2023 **Best Capstone Thesis Award**, Department of Computer Science, Ashoka University
- 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

STUDENT ORGANISER

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

University of Michigan

Apr. 2023

ACM CSCW 2022

STUDENT VOLUNTEER AND REVIEWER

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

Virtual

Nov. 2022

The CrossThink Journal

GENERAL CHAIR

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

Ashoka University

Aug. 2022 - present

CANDID Research Group

FOUNDER AND STAFF RESEARCHER

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

Ashoka University

Apr. 2022 - present

Academic Affairs Board

CS REPRESENTATIVE

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

Ashoka University

Fall 2021, Spring 2021

The CS Society

INTERIM PRESIDENT, HEAD OF DEVELOPMENT

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

Ashoka University

Feb. 2020 - Jun. 2022

WiCS Research Reading Group

MEMBER, PRESENTER

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

Ashoka University

Aug. 2020 - Jun. 2022

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

MARTIN SAVESKI

MSAVESKI@UW.EDU

PhD Advisor at UW

JOYOJEET PAL

JOYOJEET@UMICH.EDU

Advisor and collaborator on multiple studies

DEBAYAN GUPTA

DEBAYAN.GUPTA@ASHOKA.EDU.IN

Capstone project/thesis advisor at Ashoka University