Avijit Ghosh

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Education

Northeastern University — *Boston, MA*
Ph.D. in Computer Science | *Advisor: Alan Mislove* — *2019 - Present*

Indian Institute of Technology (IIT) Kharagpur — *Kharagpur, India*
B.Tech. in Chemical Engineering, M.Tech in Financial Engineering, Minor in Computer Science — *2014 - 2019*

Experience

Northeastern University — *Boston, MA*
Research Assistant at Khoury College of Computer Sciences — *Sep 2019 - Present*

- Research interests: Social Networks, Algorithmic Auditing, Machine Learning, Human Computer Interaction, Usable Privacy
- Study of advertiser behavior and targeting patterns on Facebook
- Investigated the ad reach information obtained from Facebook's ad transparency feature and the personal targeting dataset from Propublica's Facebook ad dataset, aided with controlled ad placement experiments. Findings published at IEEE ConPro 2019.

LIG, University of Grenoble Alps — *Grenoble, France*
Visiting Researcher — *May 2019 - July 2019*

- Study of how news companies promote different items on social media, investigating possible patterns of differential information spreading using both posts and ads. Preparing a manuscript to be submitted at WWW'20.

Xerox Research Centre — *Bangalore, India*
Research Intern — *May 2017 - July 2017*

- Implemented XTrack, a Smart Vehicle Tracking and Battery usage minimizing Algorithm, using BLE to distribute GPS information.
- Uber Surge Price Prediction using Spatio-Temporal techniques like the Neural Hawkes and Recurrent Marked Temporal Point Process. Was awarded the title of Best Internship Project.

Google Summer of Code - OpenMRS — *Remote*
GSoC Student — *Apr 2016 - Aug 2016*

- Replaced the HTML XForms system used in the Android app with native generated forms using the Forms REST Api and added offline form saving. Configured Travis CI to automatically build and push the apk to play store. Contributed 100K lines of code.

IIT Kharagpur — *Kharagpur, India*
Undergraduate Researcher — *2014 - 2019*

- Vector space representation of organic molecules to predict aqueous solubility using deep learning techniques.
- Automated Extraction of Catchwords from Legal Documents using a novel NER based tagger.
- Automatically position user comments against relevant news article paragraphs. Presented at ECIR 2019.
- Data Driven Disaster Response Systems using Social Media (at the CNERG Lab):
  - Project: Savitr - Realtime location extraction during emergencies, published at WWW-SMERP 2018.
  - Project: Classification and Summarization of tweets during a disaster event, presented at IBM Day 2016.

Publications

Analyzing Political Advertisers' Use of Facebook's Targeting Features — *Conpro '19*
Avijit Ghosh, *Giridhari Venkatadri, Alan Mislove* — *San Francisco, California*

Public Sphere 2.0: Targeted Commenting in Online News Media — *ECIR '19*
Ankan Mullick, Sayan Ghosh, Ritam Dutt*,* **Avijit Ghosh***, *Abhijnan Chakrabarty* ** equal contribution* — *Cologne, Germany*

SAVITR: A System for Real-time Location Extraction from Microblogs during Emergencies — *WWW-SMERP '18*
Ritam Dutt, Kaustubh Hiware, **Avijit Ghosh**, *Rameshwar Bhaskaran* — *Lyon, France*

Molecule2Vec: Vector Space Representation of Organic Molecules for prediction of properties using Deep Neural networks — *EUCHEMS '18*
Avijit Ghosh, *Debasis Sarkar* — *Liverpool, UK*

WebSelect: A Research Prototype for Optimizing Ad Exposures based on Network Structure — *WITS '16*
Avijit Ghosh, *Agam Gupta, Divya Sharma, Uttam Sarkar* — *Dublin, Ireland*

Awards & Grants

2019 **Winner**, Best Poster Award — *ECIR'19*
2019 **Winner**, Institute Order of Merit - Technology — *IIT Kharagpur*
2018 **Winner**, SGSIS Institute Challenge Grant - Worth INR 1 Million — *IIT Kharagpur*

Skills

Languages Python, Java, C, R, Bash, SQL, HTML/CSS, JavaScript, Matlab
Frameworks Git, Travis, Keras, TensorFlow, Docker, Android