

Anurag Roy

PURSuing PHD IN CSE AT IIT KHARAGPUR

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*"Our machines are dumb,
We are just trying to make them less dumb."*

Publications

Retrieving information from multiple sources

- Designing a new NN model for retrieval of documents relevant to given queries.
- Coded in Tensorflow(python).
- Short paper accepted at **WWW 2018**.

March 2017 -Jan 2018

*Dr. Parth Gupta, Amazon India,
Dr. Kripabandhu Ghosh, IIT Kanpur
Dr. Saptarshi Ghosh, IIT Kharagpur*

Combining Local and Global Word Embeddings for Microblog Stemming

- Designing a new stemming algorithm.
- The algorithm can help stem words based on their contextual meaning.
- Short paper accepted at **CIKM 2017**.

Dec. 2016-May 2017

*Dr. Saptarshi Ghosh, IIT Kharagpur
Dr. Kripabandhu Ghosh, IIT Kanpur*

A Novel Word Embedding Based Stemming Approach for Microblog Retrieval

- Designed a new stemming algorithm.
- The algorithm can help stem words which was not possible by rule based stemming algorithm.
- Short paper accepted at **ECIR 2017**.

Oct. 2016

*Dr. Saptarshi Ghosh, IIT Kharagpur
Dr. Kripabandhu Ghosh, ISI Kolkata*

Microblog Retrieval in a Disaster Situation: New Test Collection for Evaluation

- Implemented unsupervised deep learning techniques to retrieve topic relevant tweets.
- Paper accepted at **SMERP 2017**.

Jul. 2016 - Oct. 2016

*Dr. Saptarshi Ghosh, IIT Kharagpur.
Dr. Kripabandhu Ghosh, ISI Kolkata*

Sleeping beauties in Computer Science: characterization and early identification

- Analyzed the patterns followed by sleeping beauties in computer science
- Developed a method to predict sleeping beauties in computer science
- Journal Paper accepted at **Scientometrics 2017**

March. 2016 - Exp. Oct. 2017

*Dr. Tanmoy Chakraborty, IIIT Delhi,
Dr. Saptarshi Ghosh, IIT Kharagpur*

Projects

Image retrieval from textual descriptions in a zero-shot setup

- Developed a novel GAN based model for retrieving images from textual descriptions of unseen classes
- The model out-performs previous state of the arts by a considerable margin

16th, Aug. 2019 - 25th Jan. 2020

*Dr. Vinay Kumar Verma, IIT Kanpur
Dr. Kripabandhu Ghosh, TRDDC
Pune*

Dr. Saptarshi Ghosh, IIT Kharagpur

Cleaning Noisy Audio Tags using Multimodal data

- Developing a model which would leverage the additional information contained in the corresponding images to audio tags in order to clean the noisy audio tags.

12st, Nov. 2019 - present

*Deepank Verma, IIT Bombay
Dr. Arnab jana, IIT Bombay
Dr. Saptarshi Ghosh IIT Kharagpur*

Emotion Recognition from Multimodal Data

- Developing a deep learning model which would leverage facial, body gesture and audio data to detect the emotion of a person.

1st, June 2016 - 1st, July 2016

*Dr. Abir Das, IIT Kharagpur
Dr. Saptarshi Ghosh, IIT Kharagpur*

Internships

India ML Team, Amazon Development Center India Pvt. Ltd.

- Developed machine learning models to Predict Trust Score

6th, May. 2019 - 19th, July 2019

*Saurabh Sohoney, Senior Machine
Learning Scientist Amazon*

Summer Intern at CNERG, IIT Kharagpur

3rd, May. 2016 - 30th, June 2016

- Developed an on-line survey application in flask and jinja to create the training set from the reddit data.
- Used machine learning models to understand the relative importance of content and responses on community survival in Reddit.

Dr. Niloy Ganguly, IIT Kharagpur

Deep Learning in NLP at IIT Kharagpur

1st, June 2016 - 1st, July 2016

- Implemented Mikolov's recurrent neural network language model in python.
- Implemented a neural machine translation model in python.

Dr. Sudeshna Sarkar, IIT Kharagpur

Winter internship at IEST Shibpur

2nd, Dec 2016 - 1st, Jan. 2017

Developed using python and scikit-learn a program which identified rumor tweets in real-time by learning from previous data.

Dr. Saptarshi Ghosh, IEST Shibpur

Summer Intern at IIT Kanpur

10th, May 2017 - 30th, June 2017

- Designed a new clustering algorithm to capture the morphological variants of a word in a noisy corpus.
- The clustering algorithm is language independent

Dr. Arnab Bhattacharya, IIT Kanpur,

Dr. Saptarshi Ghosh, IIT Kharagpur,

Dr. Kripabandhu Ghosh, IIT Kanpur

Technical Skills

Programming Languages and Tools: C, C++, Python, MySQL, SQLite, tensorflow, theano

OPEN-SOURCE CONTRIBUTIONS

TFlearn: Contributed more than 230 lines of code

TECHNICAL PROFILES

Hackerearth: www.hackerearth.com/users/anu15roy

github: <https://github.com/ranarag>

Google Scholar: <https://scholar.google.co.in/citations?user=1u-Ly3UAAAAJ&hl=en>

DBLP: <https://dblp.uni-trier.de/pers/hd/r/Roy:Anurag>

Education

IIT Kharagpur

Kharagpur, West Bengal

PURSUING PHD IN COMPUTER SCIENCE AND ENGINEERING

Jan. 2019 - present

- Research Topic: Multimodal Machine Learning
- current CGPA(out of 10) 8.81

IEST Shibpur

Howrah, West Bengal

B.E.(HONS.) WITH IN COMPUTER SCIENCE AND TECHNOLOGY

Aug. 2013 - 2017

- CGPA(out of 10) 8.13

Army Public School

Ballygunge, Kolkata

CLASS XII IN SCIENCE WITH COMPUTER APPLICATION

- 83 % (CBSE)

The Future Foundation School

Tollygunge, Kolkata

CLASS X IN SCIENCE WITH COMPUTER APPLICATIONS

- 92 % (ICSE)

Work Experience

Software Engineer at Polaris Networks

3rd, Jul-2017-23, Jul-2018

- Designed SIP protocol stack for MCPTT(Mission Critical Push To Talk) server tester.
- Designing NAS protocol stack and UE emulator for 5G core network tester.
- Nominated for Star Performer Award for the year 2017

Sector 5, Salt Lake Electronics

Complex, Kolkata 700091

Junior Research Fellow, CSE, IIT Kharagpur

24, Jul-2018, present

- Under the supervision of Dr. Saptarshi Ghosh