

Abhishek Maiti

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abhishekmaiti.com

EDUCATION

IIIT Delhi, *New Delhi, India*

Bachelor of Technology in Computer Science and Engineering (Honors) with minor in Economics

GPA: 8.56 / 10.00

July. 2016 – May. 2020

Bosco Public School, *New Delhi, India*

All India Senior School Certificate Examination (AISSCE)

Percentage: 96.2%, Silver Medallist

March. 2014 – May. 2016

Bosco Public School, *New Delhi, India*

All India Secondary School Examination (AISSE)

CGPA: 9.8/10.0

June. 2010 – April. 2014

RESEARCH EXPERIENCE

The Wadhvani Institute for Artificial Intelligence, *Mumbai, India*

Associate Machine Learning Scientist - I

June. 2020 – Present.

- Working on 3D human reconstruction, synthetic data generation and disentanglement to identify low birth weight babies using only monocular videos. [Problem Statement]
- Refined the data pipeline to reduce model iteration time.
- Working on reducing domain-gap between two different streams of baby data.

Vision and Learning Lab - Kyung Hee University, *Seoul, South Korea*

Research Collaborator

May. 2021 – Present.

- Working on video domain generalization under the guidance of Prof. Jinwoo Choi

MIDAS - IIIT Delhi, *New Delhi, India*

Research Collaborator

May. 2020 – May. 2021

- Worked on interpretability of vision transformers with Prof. Rajiv Ratn Shah.

IBM Research Lab, *New Delhi, India*

Summer Research Intern

May. 2018 – July. 2018

- Quantified impact for scientific texts using Influence Dispersion Trees (IDT) and designed a metric which outperforms raw citation count to predict popularity.
 - Accepted at **ACM/IEEE Joint Conference on Digital Libraries** (Illinois-USA), 2019. Nominated for **Vannevar Bush Best Paper Award** and awarded the **Best Student Paper Award**.
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WORK EXPERIENCE

DeepGears Ltd., *London, UK*

Computer Vision Specialist - Freelancer

July. 2021 – December. 2021

- Designed and deployed a 3D human reconstruction pipeline to enable virtual try-ons for adults.
- Enabled real-time 3D mesh generation according to size of user inferred from the uploaded picture or given by the user.

Expedia Inc, *Gurgaon, India*

Associate Software Development Intern

May. 2019 – July. 2019

- Designed and implemented price based car policy system as a part of the Egencia Booking System.
 - Deployed for ~ 3000 EU and NA clients. Offered full-time employment for my performance.
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HONORS AND AWARDS

- Recipient of **Dean's R & D award** for exceptional research output during 2019-20 academic year.
 - Recipient of **Special Interest Group - Information Retrieval (SIGIR)** travel grant.
 - Secured **Runners Up** position at Workshop for AI in Computational Social Science for research poster presentation.
 - Selected for **Google Tech Intern Meet** (2018).
 - Selected for **Kishore Vaigyanik Protsahan Yojana (KVPY)** with All India Rank **634** (out of 50,000 candidates) by Govt. Of India for showing research potential in basic sciences.
 - Ranked **42 out of 400 teams** in Battle of Brains Coding Competition organized by ABES Engineering College, Ghaziabad.
 - Honored by Bosco Public for **securing 2nd position in school and in top 0.2 percentile** in All India Senior School Certificate Examination (AISSCE).
 - Secured **3rd Position** in a Capture The Flag (CTF) event by Facebook.
 - Secured **State Rank 2** in **International Informatics Olympiad (iiO)** and multiple times school topper organized by Science Olympiad Foundation (SOF).
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PUBLICATIONS

- V. Udandarao*, **A. Maiti***, S. Vyalla*, D. Srivatsav*, Y. Yin, R. Shah, "COBRA: Contrastive Bi-Modal Representation Learning", 2nd TUSION Workshop held in conjunction with International Joint Conference on Artificial Intelligence (IJCAI-PRICAI) - 2020 [[Paper Link](#)]
 - D. Mohapatra*, **A. Maiti***, S. Bhatia and T. Chakraborty, "Go Wide, Go Deep: Quantifying the Impact of Scientific Papers Through Influence Dispersion Trees," 2019 ACM/IEEE Joint Conference on Digital Libraries (JCDL), Champaign, IL, USA, 2019. [[Paper Link](#)]
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SELECTED PROJECTS

ReCurrency Network

Guide: Prof. Saket Anand

Aug. 2018 – Nov. 2018

Designed models to trade USD/INR forex pair and achieved **directional accuracy of 60%** and **RMSE (Root Mean Squared Error) of 0.6** [[slides](#)]

Drug Target Prediction Challenge

Guide: Prof. Angshul Majumdar

Aug. 2018 – Nov. 2018

Used General Matrix Factorisation and Neural Collaborative Filtering to predict drug target compatibility of a drug-target pair. Achieved **nDCG of 0.78** and **hit ratio of 0.9** [[report](#)]

A Rainbow From Shades Of Gray: Video Colorization

Guide: Prof. Saket Anand

Jan. 2019 – May. 2019

Used Fusion Network Architecture based on LSTMs and CNNs to convert black and white **videos of more than 10s** to colored videos. [[slides](#)]

Text2Table

Guide: Prof. Tanmoy Chakraborty

Jan. 2019 – May. 2019

Used snowballing and doc2vec to extract relationship from Wikipedia text and used them to summarize text to tables. Achieved **Recall of 0.8** against a **precision of 0.6**. [[Report](#)]

Model-based RL Approaches: A Comparison

Guide: Prof. Sanjit Kaul

Aug. 2019 – Nov. 2019

Compared different methods of encoding states by removing any priors on the latent space. Also compared different evolution algorithms employed for searching the parameter-space for optimal policies. [[slides](#)]

Bachelor's thesis

Guide: Prof. Saket Anand

Jan. 2019 – Dec. 2019

Worked on obtaining high fidelity self-supervised/semi-supervised representations of data to enable semantically meaningful cluster on the latent space.

Independent Project: Video Segmentation and Summarisation

Guide: Prof. Tanmoy Chakraborty

Aug. 2019 – Dec. 2019

Worked on designing an automated system to generate 'table of contents' for long educational lecture videos leveraging speech and text.

SKILLS & OTHERS

Programming Languages: Python (PyTorch, Pandas, Tensorflow, NumPy, NetworkX), C++, C, Java, MATLAB, R

Machine Learning: Representation Learning, Multiview Geometry, Disentanglement, Model Explainability.

Databases: SQL, MongoDB

POSITIONS OF RESPONSIBILITY & MEMBERSHIPS

- Volunteer - ICLR (2020, 2021), ICML (2020), NeurIPS (2020).
 - Program Chair - JCDL (2020)
 - Teaching Assistant (Involved in grading, conducting tutorials holding office hours for doubts & Project evaluations)
 - Data Structure and Algorithms (Freshmen, 350 students)
 - Machine Learning (Juniors and Seniors, 130 Students)
 - Captain - IIIT Delhi Table Tennis Team
 - Student Editor - Kaleidoscope (School Magazine)
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VOLUNTEER WORK

HPCL-Mittal Energy Ltd. - Corporate Social Responsibility, Bathinda, Punjab

Volunteer

June. 2017 – July. 2017

- Delivered free medicines to village inhabitants as well as took part in organizing a free health check-up booth on the outskirts of Talwandi Sabo. This report contains a summary of my experience.
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