

EDUCATION

- **Indian Institute of Technology** Roorkee, India
B.Tech in Electrical Engineering; GPA: 9.905/10 July 2015 – May 2019
- **M.M. Public School** Delhi, India
All India Secondary School Certificate Examination; Percentage: 97.6/100 April 2013 – March 2015

EXPERIENCE

- **Adobe Research** Bengaluru, India
Research Scientist/Engineer Sep 2019 - Present
- **Adobe Research** Bengaluru, India
Research Intern May 2018 - July 2018
- **AGH University of Science and Technology** Krakow, Poland
Research Assistant June 2017 - July 2017

SCHOLASTIC ACHIEVEMENTS

- **Institute Silver Medal:** Awarded the prestigious medal by President of India for exceptional academic performance.
- **Department Gold Medal:** Highest CPI in entire department among all specializations with 150+ students.
- **Joint Entrance Examination:** All India Rank - 156 among 1.4 Million Candidates in JEE Main - 2015.
- **KVPY Fellow:** Awarded KVPY Fellowship by the Department of Science and Technology , Government of India.
- **Awards:** Awarded Shakuntala Devi Prize and 1988 Batch Alumni Prize for exceptional academic performance.
- **Awards:** Nominated Twice for OP Jindal Award; Once for IITR Heritage Excellence Award; Once for Encore Award

PROGRAMMING SKILLS

- **Languages:** Python, C++, Java
- **Technologies:** MATLAB, NLP, Computer Vision, DL, RL

PUBLICATIONS

- **ICPR 2020:** *ICPR 2020 - Competition on Harvesting RawTables from Infographics*
As organizer of the ICPR2020 Competition on Chart Parsing
Authors: Kenny Davila, Christopher Tensmeyer, Sumit Shekhar, **Hrituraj Singh**, Srirangaraj Setlur, Venu Govindaraju
- **EMNLP 2020:** *STL-CQA: Structure-based Transformers with Localization and Encoding for Chart Question Answering*
Authors: **Hrituraj Singh**, Sumit Shekhar
- **EMNLP Findings 2020:** *Incorporating Stylistic Lexical Preferences in Generative Language Models*
Authors: **Hrituraj Singh**, Gaurav Verma, Balaji Vasana Srinivasan
- **CICLING 2019:** *Generating Summaries tailored to target characteristics*
Authors: Kushal Chawla, **Hrituraj Singh**, Arijit Pramanik, Mithlesh Kumar, Balaji Vasana Srinivasan.
- **IEEE TENCON 2019:** *Multisurface Proximal SVM Decision Trees For Heart Disease Classification*
Authors: **Hrituraj Singh**, N.V. Navaneeth, G.N. Pillai









PATENTS

- **[2020]:** *Modality Agnostic Information Retrieval from Documents*
Filed in Dec 2020
Inventors: **Hrituraj Singh**, Aishwarya Aggarwal, Jatin Lamba, Anshul Nasery, Denil Mehta, Balaji Vasana Srinivasan
- **[2020]:** *A Method for Multimodal Structure-based Attention for Interpretable Question/Answering on Data Charts*
Filed in Nov 2020
Inventors: **Hrituraj Singh**, Sumit Shekhar
- **[2019]:** *Generating Summary Content tuned to a target characteristic using word generation model*
Filed in Jan 2019
Inventors: Balaji Vasana Srinivasan, Kushal Chawla, Mithlesh Kumar, **Hrituraj Singh**, Arijit Pramanik

PREPRINTS

- [\[PDF\]](#): *MIMOQA: Multimodal Input Multimodal Output Question Answering*
Under Review in NAACL 2021
Authors: **Hrituraj Singh**, Denil Mehta, Anshul Nasery, Jatin Lamba, Aishwarya Aggarwal, Balaji Vasana Srinivasan
- [\[PDF\]](#): *Semantically aware Image Extrapolation by Addition of New Objects*
Under Review in CVPR 2021
Authors: Bholeshwar Khurana, Soumya Dash*, Abhishek Bhatia*, **Hrituraj Singh**, Aniruddha Mahapatra, Kuldeep Kulkarni
- [\[PDF\]](#): *DRAG: Director-Generator Language Modelling Framework for Non-Parallel Author Stylized Rewriting*
Under Review in EACL 2021
Authors: **Hrituraj Singh**, Gaurav Verma, Aparna Garimella, Balaji Vasana Srinivasan
- [\[PDF\]](#): *Entity Decoupling and Variable Alignment for First Order Logic Parsing*
Under Review in EACL 2021
Authors: **Hrituraj Singh**, Milan Aggarwal, Balaji Krishnamurthy

PROJECTS

- **Multisurface Proximal SVM Boosted Decision Trees**  Roorkee, India
EED IIT Roorkee Jan 2019 - April 2019
- **Brain Tumor Segmentation using Deep Learning** Roorkee, India
EED, IITR May 2018 - Feb 2019
- **Electrical Load Forecasting using LSTM**  Roorkee, India
Industry Oriented Project, EED IIT Roorkee May 2017 - Dec 2017
- **Recommendation System for Choosing Electives**  Roorkee, India
Artificial Intelligence and Electronics Society, IITR Jan 2017 - March 2017
- **Mini Projects**
Independent Projects Jan 2017 - Present
 - **Pixel CNN**: A naive implementation of PixelCNN in Pytorch as described in the paper by A Oord et. al 
 - **Pytorch Transformer**: Implementation of Transformer Network by Vaswani et al. in Pytorch library 
 - **LSTM Text Generator**: Simple LSTM Based Text Generator trained using Plain text file purely in numpy 
 - **Particle Swarm Optimization**: A naive implementation of PSO in Python with Animation of Swarms 
 - **RajFlow**: A naive tensorflow/Pytorch like small library in pure numpy for CNNs incl. backpropagation 

VOLUNTEERING

- **[2019]**: *Volunteered as a Teaching Assistant*
Undergraduate Course on Artificial Neural Networks
Supervised the lab work while solving the doubts of an undergrad class of 30 students, designed and conducted Viva
- **[2017-18]**: *Volunteered as a Meal Server*
For Robinhood Army Local IIT Roorkee Chapter
Distributed the extra food cooked in the hostel messes of IIT Roorkee to nearby poor children from slums of Roorkee
- **[2015-2016]**: *Volunteered as a Teacher*
For National Service Scheme
Taught financially poor children high school mathematics and science for free, Conducted workshops for practical learning

MISCELLANEOUS

- **Youth Delegation**: Selected by the Ministry of Youth Affairs and Sports to represent Indian in South Korea
- **NGO**: Cofounded the Local Chapter of Robinhood Army at IIT Roorkee to distribute food among homeless kids
- **Mentorship**: Co-founded in a team the flagship Student mentorship programme of IIT Roorkee in 2017
- **Entrepreneurship**: Actively initiated, in a team of Entrepreneurship cell, the first ever E-Summit of IIT Roorkee
- **HPAIR**: Selected for Harvard Project for Asian and International Relations as one of 300 delegates from around globe
- **Tsinghua University**: Accepted for Experiencing China Summers Program by Tsinghua University, China.
- **United Nations**: Selected for the United Nations Youth Assembly 2017 held at New York, USA.
- **IIM Lucknow**: Interned under Prof. Sameer Mathur performing analysis on a range of marketing issues
- **Eagerbug**: Interned for a period of month as a content writer in an emerging startup for JEE aspirants