

Utkarsh Patel

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EDUCATION

- Indian Institute of Technology Kharagpur** Kharagpur, India
• *Bachelor and Master of Technology (Dual Degree); GPA 9.47 / 10* Jul 2018 - May 2023 (Expected)
Major: Electronics & Electrical Communication Engineering; Minor: Computer Science
- Shah Faiz Public School** Ghazipur, India
• *All India Senior School Certificate Examination (CBSE); Marks 94.8%* May 2017
- Shah Faiz Public School** Ghazipur, India
• *All India Secondary School Examination (CBSE); GPA 10 / 10* May 2015

KEY PROJECTS

- Logical Fallacy Detection to Defend Against Online Hate Speech** Feb 2021 — Present
• *Guide — Prof. Mainack Mondal and Prof. Animesh Mukherjee* Natural Language Processing
 - Created a Corpus of posts related to Politics from online debate portals and social media using Web Scraping libraries like urllib, scrapy, BeautifulSoup, etc.
 - Implemented a Semi-Supervised GAN based learning for robust identification of hate speech
 - Used BERT as the Discriminator of the GAN; our model outperforms the classical BERT when both are fine-tuned on a small batch (less than 20%) of labeled examples
- Targeted Aspect-based Sentiment Analysis** Dec 2020 — Jan 2021
• *Self Project* Natural Language Processing
 - Performed aspect-based sentiment analysis by transforming the task into sentence-pair classification task via constructing auxiliary sentences from target-aspect pairs
 - Used pre-trained BERT model and fine-tuned it on SentiHood data set
 - Achieved aspect F1-score of 0.90 and sentiment AUC of 0.986
- Identification of Autism Spectrum Disorder** Aug 2020 — Dec 2020
• *Guide — Prof. Debasis Samanta* Machine Learning
 - Worked on the ABIDE data set to extract and process resting state functional MRI data
 - Used correlation-based approach to determine functional connectivity between ROIs
 - Implemented various machine learning models to classify subjects as autism (ASD) patients and typically developing (TD) participants; achieved test accuracy of 0.68 and 0.65 using SVM and KNN classifier respectively

ACHIEVEMENTS

- Academic**
 - Holding **Department Rank 1** among the dual degree students of E&ECE department
 - **Changed Department** to E&ECE by acquiring **9.69 CGPA** in the first year
- Google Coding Competitions**
 - **Kick Start 2021 Round C**: Secured **Global Rank 70** among around 12k contestants
 - **Kick Start 2021 Round A**: Secured **Global Rank 814** among around 20k contestants

TECHNICAL SKILLS

- **Programming Languages**: C++, Python
- **Libraries / Frameworks**: TensorFlow, Keras, PyTorch, Scikit-learn, Pandas, LIME, BeautifulSoup, NetworkX
- **Softwares / Platform**: MATLAB, Git, L^AT_EX

RELEVANT COURSEWORK

- **Completed with Laboratory Component**: Algorithms, Programming and Data Structures, Digital Signal Processing, Communication Systems
- **Completed**: Machine Learning, Probability and Stochastic Processes, Matrix Algebra, Speech Processing, Control Theory