

Utkarsh Patel

C-231, Patel Hall of Residence, IIT Kharagpur, WB - 721 302

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EDUCATION

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


ACHIEVEMENTS

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- **Department Rank 1** among the Dual Degree students of E&ECE department 2021
 - **Global Rank 70** among around 12,200 contestants in **Google Kick Start 2021 (Round C)** 2021
 - Qualified for **Microsoft Engage** mentorship program 2021
 - **Department Change** to E&ECE department by acquiring **9.69 CGPA** in the first year 2019

EXPERIENCE

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- **Complex Networks Research Group** Advisors: Prof. Mainack Mondal, Prof. Animesh Mukherjee IIT Kharagpur
Undergraduate Researcher Feb 2021 — Present
 - Created a Corpus of posts related to Politics from online debate portals using **BeautifulSoup**
 - Used **NetworkX** to build Support and Dispute networks to identify key users, communities and ideologies
 - Implemented a **Semi-Supervised GAN** based **Transformer** in **PyTorch** for Logical Fallacy detection
 - The model outperforms **BERT** for datasets having significantly less number of labelled examples
 - **Brain-Computer Interface Research Lab**  Advisor: Prof. Debasis Samanta IIT Kharagpur
Undergraduate Researcher Aug 2020 — Dec 2020
 - Worked on the **ABIDE** dataset to extract and process **Resting-state Functional MRI** data
 - Used correlation-based approach to determine Functional Connectivity between ROIs
 - Implemented various classification algorithms to classify subjects as Autistic or not from the connectivity matrices
 - Achieved test accuracy of 0.68 and 0.65 using **Support Vector Machines** and **K-Nearest Neighbours** respectively

PROJECTS

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- **Targeted Aspect-based Sentiment Analysis**  Dec 2020 - Jan 2021
 - Transformed the task into Sentence-pair classification by constructing Auxiliary Sentences from target-aspect pairs
 - Fine-tuned **BERT** on the transformed **SentiHood** dataset in **PyTorch**
 - Achieved Aspect F1-score of 0.90 and Sentiment AUC of 0.986

TECHNICAL SKILLS

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- **Programming Languages:** C++ (Proficient), Python (Proficient), Java
 - **Libraries & Tools:** PyTorch, TensorFlow, Keras, NetworkX, BeautifulSoup, Git, L^AT_EX

RELEVANT COURSEWORK

Algorithms (T/L), Programming and Data Structures (T/L), Machine Learning (T), Neural Networks (T), Probability and Stochastic Processes (T), Matrix Algebra (T), Speech Processing (T/L)

EXTRACURRICULAR ACTIVITIES

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- **Dramatics:** Part of Gold Medal winning Dramatics Team of Patel Hall in inter-hall stage play, 2019
 - **Quizzing:** Member of Patel Hall's Quiz Team