Ankit Kumar Upadhyay

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Education

Rensselaer Polytechnic Institute, *Ph.D. in Computer Science*   ***Aug 2023 – Aug 2028***

JSS Academy of Technical Education, *Bachelor of Engineering*   ***Aug 2019 – Aug 2023***

- **Department:** Computer Science and Engineering
- **Overall CGPA (up to seven semesters)**: 9.39/10

Radiant International School, *High School Diploma*   ***Apr 2014 - May 2018***

- Class 10th: 10 CGPA
- Class 12th: 93.6%

Skills

- **Programming Languages and Technologies:** Python, C, C++, Java, HTML, CSS, Javascript, Kotlin, PyTorch, Hugging Face Transformers, Fastai, Machine Learning, Deep Learning, NLP, Neural Networks
- **Interpersonal Skills:** Leadership, Teamwork, Communication
- **Online coursework:** CS50 Introduction to Artificial Intelligence using Python • Machine Learning Specialization-Coursera • Deep Learning- Fastai • Natural Language Processing- Hugging Face
- **Languages Known:** English, Hindi, Sanskrit, Kannada, German (Beginner)

Experiences

Defence Research and Development Organisation | *Student ML Intern*   ***Aug 2022- Dec 2022***

- Developed an ML algorithm to automate the process of identification of enemy targets using laser beams and sophisticated camera systems.

Neuromatch Academy- Deep Learning | *Fellow*   ***10 Jul 2022 - 29 Jul 2022***

- Developed a language model to classify argumentative elements in grade 6-12 student writing as "effective," "adequate," or "ineffective". Delivered a presentation communicating the outcomes of the research. Selected on a full scholarship for coursework and research project.

Cambridge Centre for AI in Medicine, University of Cambridge | *Participant*   ***5 Sep 2022 - 9 Sep 2022***

- Accepted on a full financial aid to the first-ever Online Summer School with a focus on ML and AI in healthcare being hosted by Cambridge Centre for AI in Medicine.

India International Science Festival 2021 | *Designer*   ***Oct 2021 – Nov 2021***

- Ideated and presented an ed-tech solution: ***e-Ankuram*** under the Engineering Students category, to ensure achieving the target of the fourth Sustainable goal: Quality Education. Secured a spot in the top 5 among a total of 20 teams.

Quantum Computing, The Coding School and IBM | *Student*   ***Sep 2020 – May 2021***

- Selected among the top 1000 candidates for a two-semester long course in Introduction to Quantum Computing to learn foundational mathematics, Quantum Mechanics, Quantum Circuits, and Quantum Algorithms. Scored 100% in Semester I and 96% in Semester II.

Projects

Fake News Classifier | *Developer*

- As a coding challenge for the Fatima Fellowship, trained a fake news classifier on a pretrained BERT model with an accuracy of 96%. Researched some possible reasons for misclassification of the news and identified ways to make it better by data cleaning and eliminating bias.

Image Classifier using Fastai | *Developer*

- Self-curated a dataset of 50 images each for five students and trained a convolutional neural network image classifier using Fastai API.

U.S. Patent Phrase to Phrase Matching | *Kaggle Research Competition (Top 36%)*

- Applied model ensemble technique on two Deberta and one Roberta model on a novel semantic similarity dataset to extract relevant information by matching key phrases in patent documents.

Curve fitting points | *Developer*

- Developed a Python predictor model to demonstrate the mathematical concepts of curve fitting points graphically using NumPy and Matplotlib.

Publications

- XNLI 2.0: Improving XNLI dataset and performance on Cross Lingual Understanding (XLU) , 2023 (*accepted for the oral presentation as a full paper for the "IEEE 2023 8th International Conference for Convergence in Technology (I2CT)"*) (https://arxiv.org/abs/2301.06527)

Awards and Achievements

- IEEE Student Member (*Awarded by College for high-achieving students*)
- Karnataka State Council for Science and Technology Grant- *Undergraduate Thesis on Cross Lingual Transfer Learning for Natural Language Understanding*
- Fatima Fellowship- Finalist (*Ranked among top 70 out of 700 candidates*)
- Silver Medal in International Youth Math Challenge 2022 (*Top 15% out of 5500 participants*)
- Clinton Global Initiative University 2022- (*selected among a cohort of 400 students globally*)
- Global Citizen Year Academy 2022 (*on a full scholarship, among 260 students globally*)
- Intercollegiate Hackathon (Hackwell 3.0), organized by Honeywell (Top 5)
- Publisher- Voice (collection of 25 poetries), "I", "You" and "We" (New Delhi Times, 2020)
- Harvard College Project for Asian and International Relations Asia Conference 2022 (*Delegate*)
- Bronze medal in International Youth Math Challenge 2021-Youth Category
- Semi-finalist in Climate Science Olympiad 2022 (*Research-based Competition*)
- Top 20 achievers in the city (*AISSCE exam*)
- Scholar's Badge awardee (*for high performance in High School for several years in a row*)
- Distinguished Service in High School Student Government for 5 continuous years

Leadership/Membership and Outreach

- Director of Communications and Outreach for Neuromatch Conference 2022
- Hugging Face Student Ambassador 2022
- Official Ambassador from India for International Youth Math Challenge 2022
- Sudo Club (Student Programming Club) Leader
- Student Entrepreneurship Cell (Member)
- Student Body President (Class of 2023)
- NSS Student leader at college