Yash **Bhartia**

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🎓 Yash Bhartia

Education

Birla Institute of Technology and Science, Pilani *Goa, India*

B.E. IN COMPUTER SCIENCE *August 2019 - May 2023*

- **Relevant Coursework:** Deep Learning, Foundations of Data Science, Probability and Statistics, Linguistics, Data Structure and Algorithms, Cognitive Neuroscience, Object Oriented Programming, Database Management Systems, Compiler Construction

Experience

Prodapt Solutions *Remote*

SOFTWARE DEVELOPMENT INTERN *May 2020 - July 2020*

- Built a Pre-onboarding application for new recruits
- Automated the application to schedule meetings, send emails, and manage the database dynamically according to date of joining and HR inputs

CSIS Department, BITS Pilani *Goa, India*

TEACHING ASSISTANT *May 2020 - July 2020*

- **CS F429 Natural Language Processing** - Conducted tutorial for the course and mentored over 85 undergraduates **Supervised by** Dr. Swati Agarwal

Publication

LRG at SemEval-2021 Task 4: Improving Reading Comprehension with Abstract Words using Augmentation, Linguistic Features and Voting *SemEval*

MENTOR: *Tirtharaj Dash* *2021*

Abheesht Sharma*, Harshit Pandey*, Gunjan Chhablani*, **Yash Bhartia**, Tirtharaj Dash

Arxiv, *Code*

NLRG at SemEval-2021 Task 5: Toxic Spans Detection Leveraging BERT-based Token Classification and Span Prediction Techniques *SemEval*

MENTOR: *Shan Suthaharan* *2021*

Gunjan Chhablani*, Abheesht Sharma*, Harshit Pandey*, **Yash Bhartia**, Shan Suthaharan

Arxiv, *Code*

Projects

Drug Design using Molecular Generation *Natural Language Processing*

FORMAL PROJECT, APPCAIR *August 2021 - Dec 2021*

- Leveraging Generative NLP models to assist Drug Design techniques
- **Supervised by** Dr. Ashwin Srinivasan

Tetris Language Compiler *Programming Language Design*

Github *April 2022*

- Designed a programming language to make Tetris Game and its Variants, running on terminal
- Implemented the compiler and grammar for the language

Flipkart Categorizer *Natural Language Processing*

Github *April 2021*

- A transformer (XLNet) based multi-class classifier to predict Category of item given item description. Cleaned data, visualized using Seaborn plots, and fixed class imbalance using class weights.
- model gave F1 score of .74 on validation set

Rainbow RL Implementation
Github

Reinforcement learning

December 2020

- Built a Deep Q network based agent to play Atari games in OpenAi gym environment using PyTorch
- model trained for 400 episodes wins all 21 points for pong in test

Reddit Flair Detection
Github

Natural Language Processing

July 2020

- Implemented a LSTM+Attention model using PyTorch and torchtext to classifies Reddit posts into its appropriate flairs
- model achieves an F1 score of 0.55 on validation set

Pokebattle
Github

Reinforcement Learning

August 2020

- Built an agent based on DQN network to play and win games against a fixed algorithm.
- Finished the Pokemon Battle environment, implemented a more flexible algorithm, added data for various moves and Pokemons scrapped and cleaned from multiple sources.

Quantum Chess
Github

Quantum Computation

February 2021

- Open source Quantum Chess implementation, made with Qiskit, hichesslib, and Qt
- Implemented functions like entangle, split and measure for the quantum chess pieces

Skills

Frameworks	Unity, Blender, Numpy, Scikit, PyTorch, Linux
Tools	VsCode, Vim, GIT, MySQL
Languages	Python, JAVA, C#/C++, SQL, LaTeX

Leadership and Committees

DevSoc	Game Development Vertical Head of Developer's Society (DevSoc - BITS Goa)
SAiDL	Core Member at the Society for AI & Deep Learning (SAiDL - BITS Goa)
LRG	Core Member at the Student Language Research Group (LRG - BITS Goa)
CTE	Instructor, Introduction to Machine learning and Deep learning
Quark	Instructor, Deep Learning project
Abhigyaan	Batch head for Abhigyaan organisation, educating the unprivileged