

MIHIR BANSAL

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EDUCATION

Carnegie Mellon University, School of Computer Science Pittsburgh, USA
Master of Computational Data Science | GPA: 3.93/4.00 May 2023 - Dec 2024

Courses: Machine Learning, Advanced NLP, Search Engines, Cloud Computing, Multimodal ML.

Birla Institute of Technology and Science, Pilani Hyderabad, India
B.E.(Hons.) Computer Science, Minor in Data Science | GPA: 9.37/10.00 Aug 2018 - Jul 2022

Courses: Data Structures & Algorithms, Object Oriented Programming (Teaching Assistant), Database Systems.

TECHNICAL SKILLS

Programming Languages C++, Python, C, Java, C#, R, SQL, Shell Scripting

Libraries & Frameworks Tensorflow, PyTorch, OpenFace, Transformers, .NET, Spark, Hadoop, Firebase

WORK EXPERIENCE

Microsoft Hyderabad, India
Software Engineer Jul 2022 - Aug 2023

- Worked in the Microsoft Search team to improve the ranking of acronym search results by performing a multigram matching with top user AI graph nodes, improving user engagement by 14%.
- Developed a webpage summarizer with webpage summary and FAQs for Bing web search results by using GPT-3.

JP Morgan Chase & Co. Mumbai, India
Quantitative Research Analyst Intern Jan 2022 - Jun 2022

- Developed a linear regression-based Rating Migration model, where historical rating migrations are modeled with macroeconomic scenarios to project scenario-driven rating migrations in the future.

University of Hamburg Hamburg, Germany
Research Intern Aug 2021 - Dec 2021

- Collaborated with the Language Technology Group on fine-tuning BERT Pre-Trained Masked Language Model for improving semantics-based question answering, achieving an improvement of 13% in the GLUE score.

Central Electronics Engineering Research Institute Pilani, India
Research Intern May 2020 - Jul 2020

- Performed Time Series analysis by implementing LSTM, ARIMA, and SVR Regression models to predict the PM2.5 concentration in Delhi and analyze the changes due to the COVID-19 lockdown.

PUBLICATIONS

1. Meriem Beloucif, **Mihir Bansal**, Chris Biemann. *Using Wikidata for Enhancing Compositionality in Pretrained Language Models*. Recent Advances in Natural Language Processing. 2023. ACL Anthology. [[Paper](#)]
2. B.S.A.S. Rajita, **Mihir Bansal**, Bipin Sai Narwa, Subhrakanta Panda. *Cuckoo search in threshold optimization for better event detection in social networks*. Social Network Analysis and Mining. 2022. Springer. [[Paper](#)]

SELECTED PROJECTS

Adapting Multilingual Visual LLMs for Code-mixed Visual QA Aug 2023 - Dec 2023

- Finetuned the mBLIP LLM model for low resource Hinglish code-mixed VQA by using LoRA, achieving an improvement of 34% in accuracy on the MS-COCO dataset as compared to the baseline model.

Human Emotion Detection Sept 2020 - Nov 2020

- Implemented a Genetic Algorithm for feature subset selection and classifying human emotions from facial images with 97% accuracy by using Machine Learning models.

ACHIEVEMENTS

- Institute Merit Scholarship holder at BITS Pilani in all the semesters (Top 2% in the School of Engineering).