




PARTH SHAH

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EDUCATION

University of California, Los Angeles (UCLA)

Master of Science, Computer Science

4.0¹/4.0

expected June, 2023

Indian Institute of Technology (IIT), Delhi

Bachelors of Technology, Computer Science and Engineering

8.715/10.0

Specialization in Data Analytics and Artificial Intelligence

Aug, 2020

WORK EXPERIENCE

University of California, Los Angeles (UCLA)

Jan 2021 - present

Teaching Assistant

Los Angeles, California

Presented an introduction to Field Programmable Gate Arrays (FPGAs) and Hardware Description Language (HDL), and designed five lab assignments demonstrating how to put together designs, implement them using Verilog HDL, configure the FPGA board, and test both in simulation and on real hardware.

MTX Group

Aug 2020 - Aug 2021

Machine Learning Engineer

Hyderabad, India

Deployed multiple Machine Learning pipelines that connected relational databases to validated ML models to the cloud. Implemented various sota models including BERT for indexing unstructured documents, LayoutLM for invoice processing, and created novel models for new tasks such as player embedding.

Nanyang Technological University(NTU)

June, 2019 - July 2019

NLP Research Intern

Singapore

Added a variational auto-encoder(vae) to the Dialogue RNN architecture for detection of dialogue emotions, which increased the accuracy of the vanilla model by nearly 6% on the IEMOCAP dataset.

RESEARCH PROJECTS

Interpreting BERT for downstream tasks

UCLA NLP Group

Natural Language Processing

UCLA

Adapted existing methods of attribution to explain BERT's coreference resolution decision. Furthermore, this work provides guidance for using attribution methods to analyze BERT's decision-making in downstream tasks.

Wasserstein Adversarial GAN (WAGAN)

Prof. Quanquan Gu

Adversarial Machine Learning

UCLA

Designed a novel GAN architecture to generate adversarial examples that have large Lp-norms, but are perceptually more similar to the original input using efficient tractable approximation of Wasserstein distance.

Regex Queries over Incomplete Knowledge Bases

Prof. Mausam and Srikanta Bedathur

Published at Automated Knowledge Base Construction, 2021

IIT, Delhi

Proposed the novel task of answering regular expression queries over incomplete KBs motivated by actual user query logs on wikidata used to create datasets for the task and developed a box embedding method to solve it.

COURSES AND PROGRAMMING LANGUAGES

- **Courses:** Machine Learning Algorithms, Pattern Recognition and ML, Reinforcement Learning, Information Retrieval, Deep Learning, Artificial Intelligence, Database Management, Data Structure & Algorithms, Probability and Stochastic Processes, Optimization Methods, Discrete Mathematics
- **Programming Languages:** C/C++, JAVA, Python(Numpy, Pandas, PyTorch, Tensorflow, Keras), R, SQL

SCHOLASTIC ACHIEVEMENTS

- Secured **All India Rank 18 and 54** in the online preliminary round of **ACM-ICPC, 2018 and 2017**.
- Secured **All India Rank 91** in **Joint Entrance Exam(JEE) Advanced, 2016** among 1.5 lakh students.
- Came first at **Indian Road Safety Campaign Hackathon, 2018**
- One of the ten Indian student selected for the **Huawei Seeds for the future, 2019** program .

¹4.3 if A+ is weighed as 4.3 grade-points