

Kartik Choudhary

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RESEARCH INTERESTS

- Natural Language Processing
- Reinforcement Learning
- Explainable AI
- Robotics

EDUCATION

Indian Institute of Technology Delhi, New Delhi, India

Jun 2019

Bachelor of Technology, Electrical Engineering

GPA: 7.327/10.0

B.Tech. Thesis: Occupancy Learning in Commercial Spaces

Advisor: Prof. Seshan Srirangarajan

Predicting room occupancy in institute's Lecture Hall Complex to automate HVAC system and improve room booking system.

Projects

- Signal and Noise Analysis
Estimating range and velocity of target in noisy environment using correlation processing and end-point detection. *Instructor: Prof. Seshan Srirangarajan*
- Classification and Clustering Algorithms
Comparative analysis of models implementing SVM, CNN and Sparse Autoencoders on MNIST dataset. *Instructor: Prof. Sumeet Agarwal*

Relevant Courses

- COL106 - Data Structures and Algorithms
- MTL101 - Linear Algebra and Diff. Equations
- MTL106 - Probability and Stochastic Processes
- ELL784 - Intro. To Machine Learning

WORK EXPERIENCE

Reliance Jio, Mumbai, India

Jul 2019 - Present

Received highest performance feedback rating (A*) for FY 2019-20 and 2020-21

ML Engineer

Jun 2021 - Present

- Improved root cause analysis on call mutes by implementing an explainable/interpretable model for network quality based on user hardware data and RF conditions.
- Improved network quality forecast accuracy by 15% by implementing a Mixture of Experts model
- Built automated system for network improvement strategies including antenna tilt optimization and tower placement planning

Data Scientist

Aug 2019 - Jun 2021

- Created customer churn prediction model with over 600 features improving marketing campaign delivery
- Reduced model inference time by 25% by reducing ingestion overheads and streamlining customer profiling pipeline
- Implemented A/B testing of campaigns on geographic cohorts reducing the 95% confidence interval estimates by 10%
- Unified the marketing campaigns and churn risk mitigation pipeline through a central Customer360 database reducing memory and computation costs.
- Worked with external vendor to implement their management and visualization solutions into the Customer360 database

Graduate Engineering Trainee

Jul 2019 - Aug 2019

- Customer segmentation for behaviour modelling and creating intent based features
- Won Best Project among 20+ teams.

Claym Media and Tech. Pvt. Ltd., Gurgaon, India

May 2018 - July 2018

Intern – New Technologies

- Created utility to standardize reports and perform data correctness checks on reports coming from different platforms.
- Developed framework to detect fraud techniques like Click Spamming, Fake Attribution and Country Conflict.
- Created a GUI enabling Operations Team to use the report standardization and fraud detection tools

Intern – NLP Research

- Implemented an LSTM Recurrent Neural Network to train a chat-bot with the ability to retain context
- Extracted a large corpus from Twitter with 5M publicly available tweets and their replies for training the chat-bot
- Tested and benchmarked effects of various regularization methods such as dropout and early stopping on performance and training stability.

SCHOLARSHIPS AND AWARDS

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| 1. Best Mentor - EES, IIT Delhi, India | 2018 |
| Award for contributions during the year 2017-18 by the Electrical Engineering Society | |
| 2. KVPY Fellow | 2014 |
| Eligible for scholarship under Kishore Vaigyanik Protsahan Yojana (KVPY) conducted by IISc, Bangalore, India | |

TEACHING AND LEADERSHIP

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| 1. Volunteer, Online Tutoring | Sep 2020 |
| Government Secondary School, Mahapura, India | |
| 2. Secretary, Electrical Engineering Society | Aug 2017 - Jul 2018 |
| Indian Institute of Technology Delhi, New Delhi, India | |
| 3. Student Mentor, Board of Student Welfare | Aug 2017 - Jul 2018 |
| Indian Institute of Technology Delhi, New Delhi, India | |

SKILLS

Programming Languages Python, C, C++, Java, SQL, MATLAB, R

Tools TensorFlow, PyTorch, OpenCV, NLTK, spaCy, Spark, Airflow

Languages English (Fluent), Hindi (Fluent/Native), Japanese (Elementary)

CERTIFICATES

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| 1. Probabilistic Graphical Models Specialization | Sep 2021 |
| A 3 course specialization by Stanford University on Coursera | |
| 2. Generative Adversarial Networks (GANs) Specialization | Jun 2021 |
| A 3 course specialization by DeepLearning.AI on Coursera | |
| 3. Natural Language Processing Specialization | May 2021 |
| A 4 course specialization by DeepLearning.AI on Coursera | |

TEST SCORES

JEE (Advanced) 2015	National rank 321 in the final stage out of 150k total candidates
GRE General Test	Total score 0/340. Verbal - 0/170, Quantitative - 0/170, AWA - 0.0/6.0
TOEFL iBT	Total score 114/120. Reading - 30/30, Listening - 30/30, Speaking - 26/30, Writing - 28/30