Rohit Mujumdar

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Education

Georgia Institute of Technology, Atlanta, GA   *Aug 2019 - Present*
Master of Science, Computer Science, Specialization - Machine Learning   ***GPA : 4.0/4.0***
Head Teaching Assistant, AI, Ethics & Society, (Prof. Ayanna Howard)   *Jan 2020 - Present*
Teaching Assistant, Knowledge-Based AI, (Prof. Ashok Goel)   *Aug 2019 - Dec 2019*
Coursework: NLP, Machine Learning, Deep Learning, Data Science for Epidemiology, Graduate Algorithms

Vishwakarma Institute of Technology, Pune, India   *July 2013 - May 2017*
Bachelor of Technology, Computer Engineering   ***GPA : 9.47/10***   ***Rank : 4/145***
Coursework: Data Structures, Artificial Intelligence, Data Mining, Business Analytics, HCI

Work Experience

IBM Research - *Research Intern* (Almaden Research Lab, CA, Manager - Taiga Nakamura)   *June 2020 - Aug 2020*
- Developed a time series model to forecast the resolution time of Service Requests, with > 0.80 accuracy for $> 228K$ SRs
- Contributed to the expected cost savings of 30M USD, as the formulated model went into production (CSI Project)
- Submitted a patent disclosure around employee-task assignment and reskilling; currently being filed at USPTO

Froot Research - *Data Scientist I* (Pune, India)   *Sept 2018 - May 2019*
- Developed an NLP pipeline to automate and score the essentiality of Standard-Essential Patent determination
- Created an operations analytics engine to enable predictive routing of incident tickets towards appropriate issue clusters
- Enhanced k-means clustering to generate real-time hierarchical incident ticket clusters that predict trouble trends
- Devised an LIWC-like affective computing model based on theories in Psychology to measure text-emotion alignment

HSBC Software Development India - *Software Engineer* (Pune, India)   *Aug 2017 - Aug 2018*
- Expedited analysis of IBM mainframe data by 50% by developing an internal application to enable quicker DB insights

Barclays Technology Centre India - *Business Analyst Intern* (Pune, India)   *May 2016 - July 2016*

Graduate Research

Design and Intelligence Lab, Georgia Tech *(Prof. Ashok Goel)*   *Aug 2019 - Aug 2020*
- Explored SOTA Transformer models to improve Question classification accuracy of the AI Teaching Assistant *Jill Watson*
- Expedited *Jill Watson* performance evaluation by developing a pipeline to automate the benchmarking process
- Deployed *Jill Watson* in 2 courses (Fall 2020) by using IBM Watson and by constructing the course knowledge-base

Publications and Presentations

PyBay2020, Talk : Exploring Time Series Models to Optimize Employee Efficiency   *Aug 2020*
INFORMS 2020, Poster : A Heuristic Approach To Compute Ticket Resolution Time (**Honorable Mention**)   *Nov 2020*

Key Projects

Can Machines Detect if You are a Jerk?   *Sept 2020 - Nov 2020*
- Fine-tuned BERT to assess if we can replicate the sentiments and biases shared by Redditors on the thread r/AITA
- Classified reddit posts as morally ethical/unethical; explored how machines perform in entirely subjective tasks

Propagation of Epidemics in Citation Networks   *Sept 2020 - Nov 2020*
- Investigated the imbalance in spread of ideas across academic networks caused due to differences in academic prestige
- Defined measures for institutional prestige & idea quality; simulated epidemiological models to analyze network growth

Conference Paper Acceptance Prediction   *Feb 2020 - April 2020*
- Investigated the role of peripheral features of research papers in their potential acceptability
- Devised several innovative features such as abstract novelty and complexity, research strength score, title word-cloud etc.

Semantic Search Engine using a Dynamic Ontology   *Jan 2016 - May 2017*
- Developed an e-learning platform for government schools by implementing a dynamic science ontology to store triplets (Entity-Relation-Entity) extracted from web-scraped data.
- Devised a Phrase2Vec model driven similarity-scoring algorithm to replace similar Relations by a representative Relation.

Technical Skills

Python, SQL, Protege, pandas, numpy, sklearn, nltk, pytorch, huggingface, prophet, matplotlib, git, LATEX

Leadership

Editor-In-Chief and Executive Head - Pi Editorial Board, VIT (Pune, India)   *Oct 2015 - Feb 2017*
Director Of Communications - TEDxVITPune, VIT (Pune, India)   *Oct 2015 - April 2016*