

# Rohit Mujumdar

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Atlanta, GA

## 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)

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 around employee-task assignment and reskilling which received filing approval by internal committee

### Froot Research - *NLP Researcher* (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

## Conferences and Presentations

**PyBay2020**, Talk : *Exploring Time Series Models to Optimize Employee Efficiency*

August 2020

**INFORMS 2020**, Poster : *A Heuristic Approach To Compute Service Request Resolution Time* (Submitted)

Nov 2020

## Key Projects

### *Improving Contextual Answer Generation*

Feb 2020 - April 2020

- Designed a contextual answering bot using QuAC dataset and predicted meta-information for the generated answers
- Improved the QuAC leaderboard baseline F1-score by adding attention to FlowQA model

### *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.

### *Explainable Content Moderation Using CNNs*

Oct 2019 - Dec 2019

- Built a minimal viable content moderating system to identify and flag regions of images containing violent/gory content
- Achieved an accuracy of 0.89 by using Transfer Learning with Convolutional Neural Networks (VGG-16)
- Captured model explainability by using Grad-CAM to generate visual explanations of the salience regions in the images.

### *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, Java, SQL, pandas, numpy, sklearn, nltk, pytorch, pattern, spacy, gensim, prophet, simpletransformers

## 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