

Mohit Mayank

Data Scientist – Tata Consultancy Services

4 years experience of researching in Data science, Machine Learning and algorithms. 3 years in a row assessed with top 'A' performance band. Early promotion to IT Analyst. Winner of TCS SUPERCoder 2019 - a TCS wide coding competition. Technologist and blogger with the several AI/ML/Programming articles over at Medium and my website ☺

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WORK EXPERIENCE

IT Analyst

Tata Research Development and Design Centre, TCS

2016-Present

Pune, India

Projects: *Digitate and Intelligent Services Network*

Data Science and Machine Learning solutions

- Marathon prediction; profile NY marathon runner's normal behavior, create real-time model to predict runner's behavior in next race.
- Parcel sorting optimization; profile Scandinavian parcel company's operation, suggest improvements to minimize human effort & maximize profit
- Question/Answer chatbot; create domain knowledge graph, train question/answer chatbot to answer explicit/implicit questions
- Entity extraction; identify entities from structured/unstructured text data using statistical and contextual analysis
- System expert analysis; profile a system expert's work behavior, identify areas of best/worst performance, suggest the best expert for a task
- Resolution notes mining; profile notes of alert resolution by system experts, find patterns of similar behavior, create rule book to automate task in future
- Relevant nodes discovery; minimize number of jobs in batch environment without substantial adverse effect on batch prediction accuracy
- Recommendation System; design and implement system to suggest most promising products, maximize the future clicks and increase the profit of virtual store

Research areas and Algorithms

- Reinforcement Learning; Deep Q-learning, multi-armed bandit, AC, A2C
- Computer Vision; Convolution NN, Object detection, contours, morphology
- Natural Language Processing; word2vec, knowledge graph, glove, RNN, LSTM
- Time-series; forecasting, change-point, anomaly, trend, periodicity, regression
- Optimization; genetic algorithm, linear programming, gradient decent, annealing
- Classification/Clustering; decision trees, random forests, XGBoost, k-means, hierarchical clustering, DBSCAN

Customer Engagements

- Procter & Gamble; analyze system alert data, determine the most affected areas and systems, recommendations to minimize future alerts by elimination or automation
- Credit Suisse; analyze bank's batch jobs, determine the cause of high SLA violation, recommendations to minimize SLA breach and making batch predictable

Research Intern

Centre for Development in Advanced Computing

2015

Pune, India

Task

Design and develop IoT speech recognition engine in Indian languages and deploy it on low-power hardware as a low-cost solution for the rural population.

ARTICLES/PUBLICATIONS

- String similarity – the basic know your algorithm guide (57k reads, 307 claps)
- Introduction to Linear programming with Python (34k reads, 227 claps)
- Building chatbot with Rasa (28k reads, 802 claps)
- Introduction to Genetic Algorithm (8.5k reads, 300 likes)
- Reinforcement Learning with Multi-Arm bandit (5.8k reads, 100 claps)

EDUCATION

Bachelor of Engineering (B.E.), Electronics and Telecommunication

Savitribai Phule Pune University
(formerly Pune University)

2012-2016

Pune, India

COURSES

- Andrew Ng's Machine Learning (Coursera)
- Intro to Artificial Intelligence (Udacity)
- Deep Learning: Advanced Computer Vision (Udemy)
- Deep Reinforcement Learning (UC Berkeley)
- Statistical Learning (Stanford Online)
- Probabilistic Graphical Models (Stanford Online)

ACHIEVEMENTS

- Rank 1 – TCS SUPERCoder 2019
TCS wide competitive coding competition
- Winner – Digitate Ideathon 2019
Topic: Log analyzer – Detect events, find anomalies and perform root cause analysis
- Runner up – Digitate Ideathon 2018
Topic: Interactive learning interface – asks relevant questions to build knowledge graphs
- "On the spot award"
For excellence in quick solution proposal and fast deployment
- "Star team award"
Collaborative effort for problem management
- "Special Initiative award"
Displaying out-of-the-box thinking

SKILLS

Python/R

AI/ML/Data Science

Mathematics

Algorithms

Tensorflow/Keras/PyTorch

AzureML

Knime/H2O

Spark/Databricks