Vishal Srivastava

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Education

2019 | Bachelor of Technology, Indian Institute of Technology Kanpur
Major: Electrical Engineering
GPA: 7.9/10

Experience / Projects

Jul '19 - Present | **Data Scientist**, Microsoft India Development Centre

- Recommendation for ProductAds
  - built a co-view graph of impressed ProductAds - using user click logs. Used normalized pointwise mutual information with to calculate edge weights. The number of nodes scaled to ∼100M. Obtained +4.7% CTR in production
  - trained a graphSAGE like GNN on the above Product-Product graph to learn ProductAds embedding. Used edges with weights smaller than a threshold to fetch hard negatives. Obtained +4.4% CTR gain
- Attribute Ranking in e-Commerce
  - built a model to estimate importance of attribute
  - used co-view relevance weights (above) as supervision signal to rank product attributes
  - obtained 0.86 NDCG on a human labelled test set

May '18 - Jul '18 | **Research Intern**, GIPSA Lab, Grenoble INP
Advisor: *Dr. Nicolas Tremblay*
Sampling with Determinantal Point Process

- Sampling in community structured graphs using DPPs
- Implemented Wilson's algorithm to approximate k-DPPs
- Improved performance in above using non-uniform quit-probability proportional to node-energy

Jan '18 - Apr '19 | **Bachelor's Thesis**, IIT Kanpur
Advisor: *Dr. Ketan Rajawat*

- Matrix Completion on Graphs
  - Investigated the problem of matrix completion as a graph-signal interpolation
  - obtained low-rank latent vectors on Netflix Prize dataset
  - Solved the above problem assuming local stationarity in graphs
- Large scale graph structure learning
  - Studied the problem of graph weights inference from smooth signals over large graphs
- Optimal Sensor Placement
  - investigated the problem of node selection for a signal from Gaussian Process
  - framed a combinatorial problem of sampling a subset of nodes based on mutual information maximization

Technical Skills

- PyTorch/Keras, C++/C, Python, SQL

Relevant Coursework

Statistical Signal Processing	Data Structures and Algorithms	Matrix Theory and Linear Estimation
Convex Optimisation	Applied Stochastic Process	Introduction to Bayesian Analysis

Scholastic Achievements

2018 | Awarded Anita and Santosh Mehra Scholarship by IIT Kanpur for good academic performance in the department
2017 | Awarded **Academic Excellence Award** by IIT Kanpur for academic year 2015-16
2015 | **Kishore Vaigyanik Protsahan Yojna (KVPY)** Fellowship by Govt. of India
2013 | **National Talent Search (NTSE)** Scholarship by Govt. of India