Ninad Khargonkar

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Education

University of Massachusetts, Amherst — Amherst, MA
M.S in Computer Science — GPA: 4.0/4.0 — Expected 2019

Indian Institute of Technology, Kanpur — Kanpur, India
B.S in Mathematics and Scientific Computing — 2013 – 2017

Projects

Approximate Distribution for Sparse Data — Amherst, MA
University of Massachusetts, Amherst — Jun–Aug 2017

- Worked with Prof. Peter Haas on the problem of learning a distribution from sparse data set of disease prevalence.
- The principle of maximum entropy was used to infer the distribution with the marginals and some ranked important feature pairs acting as the constraints to the optimization (numericall solved)
- The pipeline of data loading, feature selection and optimization for the input data set was implemented in Python.

Hindi Part of Speech tagging — Amherst, MA
University of Massachusetts, Amherst — Nov–Dec 2017

- Developed a part of speech (POS) tagger for Hindi by learning a word level translation between Hindi and English using mono-linugal word embeddings and parallel corpora.
- No supervised p.o.s information was provided and the tagger also improved the performance of proxy tasks.

Depth from Monocular Images — Amherst, MA
University of Massachusetts, Amherst — Nov–Dec 2017

- Studied the problem of depth prediction in monocular images through an unsupervised approach.
- Stereo image pairs were used during training to learn a disparity and hence the depth map.

Modelling Uncertainty in Deep Learning — Amherst, MA
University of Massachusetts, Amherst — Nov–Dec 2017

- Analyzed the problem of modelling uncertainty in the results from the outputs/scores of a deep neural network.
- Coded a neural network in Keras (python) for the uncertainty value calculation on cifar-10 and mnist datasets.

Experience

Software Developer — Amherst, MA
University of Massachusetts, Amherst — Sep–Nov 2017

- Worked with Prof. Alkema's lab on a project on statistical indicators for family planning in developing countries.
- Assisted in coding the simulation exercises and modelling the experiments in R programming language.

Globalink Research Internship — Winnipeg, Canada
University of Manitoba, Winnipeg — Summer 2016

- Implemented scale down sampling on graphs using different random walks and analyzed their performance.
- Statistical graph models were used to test significance of network substructures by simulations.
- Worked on a side project on simulating team performance in Uefa Euro'16 and submitted report to JSM 2017.

Technical Skills

Languages: Proficient – Python | Basic level – Java, C/C++, R, SQL
Frameworks/Libs: Numpy, Keras, Scikit-learn, Pandas, AWS, Spark
Others: Git, Bash, Vim, LaTeX, Matlab/Octave, Linux(Ubuntu)

Relevant Coursework

Graduate: Machine Learning, Optimization, Neural Networks, Bayesian Learning, Information Theory.
Undergrad: Data Structures & Algorithms, Probability & Statistics, Numerical Computation, Linear Algebra.

Scholastic Awards

- Recipient of Inspire scholarship awarded by the Govt. of India for consistent academic performance in undergrad.
- Awarded the Mitacs Globalink scholarship for a research internship in Canada in the summer of 2016.