Ninad Khargonkar

44K Southpoint Dr, Amherst, MA

Education

Expected 2019 **UMass Amherst**
M.S in Computer Science

Grad. 2017 **IIT–Kanpur**
B.S in Math & Scientific Computing

Experience

Programming Assistant

Sep'17 – Present | Biostatistics, UMass Amherst

Assisting in the coding of the FPET simulation exercises, package development and providing computational assistance in R programming.

Mitacs Globalink Research Internship

May–July'16 | University of Manitoba, Winnipeg

Implemented scale down sampling on social graphs by different types of random walks and their performance was analyzed. ERGM (statistical graph model) was used for testing significance of network substructures by simulations and model fits.

Technical skills

Programming: C/C++, Python, R

Software: Matlab, RStudio, Octave

Others: GNU/Linux (Ubuntu), Git, LaTeX, Vim

Coursework

Graduate level: Computer Vision, Machine Learning, Natural Language Processing, Neural Networks, Bayesian Learning

Undergrad: Optimization, Data Structures & Algorithms, Probability & Statistics, Numerical Computation, Linear Algebra, Real Analysis

Extra – Curricular

• Developed a simulation model in R for Euro16 tournament and analyzed biases in group stage.

• Member of the winning team of Institute Football League and an avid participant of Fantasy–PL.

• Mentored 6 freshmen as a Student Guide in the Counselling Service of IIT-Kanpur.

Contact Information

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Projects

Stochastic Variational Inference

Jan'17 – Apr'17 | Bayesian Learning (IIT-Kanpur)

Literature review of Stochastic Variational Inference (SVI) and possible extensions in this area. Implemented SVI on a Latent Dirichlet Allocation model in Python using a data sample to categorize documents into topics.

Image Colorization

Aug'16 – Nov'16 | Machine Learning (IIT-Kanpur)

Implemented an automatic colorization model (using Tensorflow/Keras) by predicting the per pixel colour histogram and using the idea of hyper columns from a pre-trained CNN (VGG-16). It was adapted for gray scale by averaging over colour channels.

High-dimensional anomaly detection

Aug'16 – Nov'16 | Optimization (IIT-Kanpur)

Study of anomaly detection techniques using classification and clustering based methods like K-nn and 1-SVM. Implemented a hybrid model using a Deep belief network to extract features and used them for one class SVM training.

Bayesian Computation

Jan'16 – Apr'16 | Undergraduate Project (IIT-Kanpur)

Studied the basics of Bayesian methods of analysis and random variable generation with approaches like MCMC and Importance Sampling. Implemented a Python program for estimation and sampling from a Weibull distribution.

Scholastic Awards

• Recipient of **Inspire scholarship** awarded by the Dept. of Science & Technology (Govt. of India).

• Awarded **Mitacs Globalink** scholarship for summer research internship in Canada in 2016.