

Kunal Ghosh

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EDUCATION

MASTERS

Machine Learning and Data Mining
Aalto School of Science
Grade - 4.42
Graduation 2017 Tentative

UNDERGRADUATE

Computer Science
Visvesvaraya Technological University
Grad May 2011 | Bangalore, India

COURSEWORK

MASTERS

- Special Course on Deep Learning
- Programming Parallel Computers
- Information Retrieval • Bayesian Data Analysis
- Machine Learning & Neural Networks
- Machine Learning Basic Principles
- Algorithmic Methods of Data Mining
- Computational Science

MOOC

Learning From Data (edX.org):
 • Instructor : Prof Yaser (Caltech)
 • 10 week long Machine Learning course with 8 homework sets and a final exam • Assignments done using **Matlab** and **LibSVM**

- Course with significant theoretical content. Topics include : Theory of Generalization, VC Dimensions, Kernel Methods and SVM • Grade: 80%

Machine Learning (Coursera):

- Instructor : Prof Andrew (Stanford)
- 10 week long course.
- Assignments done in **Octave**.
- Practical course focusing more on applications of machine learning.
- Grade: 100%

SKILLS

PROGRAMMING

Full Professional Proficiency:
Python (Including Numpy, Scipy, SciKit Learn) • Java • Shell

Working Proficiency:

- **Theano** • C • C++ (Cuda & OpenMP)
- Stan (Probabilistic Programming) • Matlab & Octave • SQL

Familiar:

Javascript • Assembly • CSS • \LaTeX

EXPERIENCE

AMAZON | Software Development Engineering in Test

Dec 2013 - Aug 2015 | Bangalore, India

- Significant Contribution : Developed tests to validate the effect of seasonality on an Shoe size recommendation system which uses customer purchases to make predictions. Implemented using **Java**.

AMAZON | Quality Assurance Engineer

Aug 2011 - Nov 2013 | Bangalore, India

- Developed a system to automatically detect UI defects (text overlaps, element mis-alignments etc) in Amazon retail websites. It was developed using **Python** and "**Image Magick**".
- Implemented a log processing system to identify new Errors/Fatals in website logs. Developed using **Python** and **Amazon internal tools** for **distributed job scheduling**.

OWNCLOUD.ORG | Google Summer of Code Intern

May 2011 - Aug 2011

- Implemented a prototype file synchronization system for OwnCloud. Implemented the SyncML server component in PHP and a prototype desktop client using the Funambol SyncML SDK.

DIGIKAM.ORG | Season of KDE Intern

May 2010 - Sept 2010

- Prototyped the Integration of Qt Script, Javascript scripting API into the Digikam app.

THESIS & PUBLICATIONS

- [1] G. Kunal, M. GuruPrasad, S. Dharini, and J. L. KiranTej. Senior thesis on face recognition. *Compared the effect on recognition accuracy of Eigen Faces, when applying three different dimensionality reduction algorithms on the input images. I implemented PCA and Locality Preserving Projections (LPP)*, Implementation : Python + NumPy, 2011.
- [2] G. Kunal, M. GuruPrasad, S. Dharini, J. L. KiranTej, and V. Hariharan. Analysis and understanding of various models for efficient representation and accurate recognition of human faces. *Proceedings of National Conference on 'Emerging Trends in IT' - eit10*, March 2010.

AWARDS

- 2014 2nd/100 teams. Amazon Internal Machine Learning Contest. (Predict Customer Support communication method Phone/Email based on customer history).
- 2013 **99.5 percentile** in GATE 2013. 1019th/224160 candidates.
- 2004 29th/~2x10⁵ candidates. National Talent Search Scholarship. State Level.

ACTIVITIES

- **ACM Student member** since 2007 and a **Professional Member** since 2013.
- Organized a workshop on "Python in Scientific Computing" led by a team from IIT Bombay and Funded by Govt. of India.
- Regularly participated in long distance running events: Personal Best of 53mins in 10K and 2hr 20mins in a half marathon.