

EDUCATION

Master of Science, Computer Science

University of Massachusetts Amherst | Amherst, USA

Machine Learning, Artificial Intelligence, Recommender Systems, Deep Learning, Applied Information Retrieval, Advanced Algorithms, Distributed & Operating Systems, Advanced Information Assurance

Aug 2016 – 2018

GPA: 4.0 / 4.0

Bachelor of Technology, Computer Engineering

Aligarh Muslim University | Aligarh, India

Aug 2011 – Jun 2015
Cumulative Performance Index: 9.92 / 10.00 (Rank 2)

Independent Courses

Neural Networks in Machine Learning ([Coursera certificate](#)), Power Searching with Google

TECHNICAL SKILLS

- Programming Experience Java, Python, C++, MATLAB, SQL, HTML, Javascript, Bash, Node.js
- Machine learning libraries Matconvnet, Scikit-learn, MXNet, Caffe, Scikit-surprise
- Tools / Technologies LaTeX, Google Guice, DynamoDB, S3, Git, Chef, Mockito

WORK EXPERIENCE

Programmer

Downes Lab (UMass)

Amherst, MA

Oct 2016-Dec 2017

- Developed a MATLAB program to track the locomotive behavior of zebrafish larvae and monitor features of relevance.
- Helped write an analysis program for generating lucid visualizations.

SDE Intern

Amazon

Seattle, WA

May 2017 – Aug 2017

- Built a web service to run data query jobs on a Hadoop cluster and a client utility to download output.
- Created a DynamoDB database to store the job histories and S3 buckets to store the output.
- Reduced the job submission and output retrieval time by around 50%.

Software Engineer

Adobe Systems

Noida, India

Jun 2015 – Jul 2016

- Developed a scalable automation infrastructure for the Adobe FrameMaker. Did testing of products.
- Developed "Chef" scripts to create pre-configured automation systems leading to easy scaling of the automation engine to multiple machines. Received "**Adobe India Spot Award**" for it.

PROJECTS

Code Repository - <https://github.com/abhaymittal/>

- **Tracking bird migration with radar data using deep learning tracks** 2018
Working with **Prof. Daniel Sheldon** and **Prof. Subhansu Maji** to develop deep learning models to perform segmentation of things like biology and precipitation in radar imagery.
- **Unsupervised object localization using a deep image colorization model** ([Poster](#)) ([Report](#)) 2017
Worked with **Prof. Erik Learned Miller** and experimented with the hidden activations of a deep neural network based image colorization model to localize objects in images in an unsupervised manner.
- **Predicting taxi trip duration in New York city** (Independent project) 2017
Used gradient boosting trees to predict the taxi trip durations in the New York City based on a dataset containing 1.5 million training records and 600k test records. Did exploratory data analysis and engineered 63 features.
- **Comparison of recommendation models on the Amazon Automotive Dataset** ([Report](#)) 2017
Compared the performance of Singular Value Decomposition, Non-negative matrix factorization and K-Nearest Neighbors with means. Incorporated sentiment analysis scores of product reviews. Languages: Python
- **Predicting the opening weekend revenue of movies released in the USA** ([Report](#)) 2016
Gathered data from heterogeneous sources (including page views from Wikipedia) for movies released in US and used clustering and classification techniques to predict the opening weekend Box Office revenue of movies. Language: python
- **Interface Jibo robot with Myo gesture control arm band and OpenBCI EEG headset** (Independent project) 2016
Developed an interface to control Jibo using arm gestures and brain signals corresponding with eye lid movements. A HackUMassIV hackathon project. Language: Node.js, Java

AWARDS AND ACHIEVEMENTS

- Adobe India Spot Award, November 2015
- Sir Syed Emerging Scholar Award, USA 2015-16
- University Merit Financial Award, AMU, India 2014-15
- Selected nationally to attend a summer school program organized by Indian Institute of Science, Bangalore during June 23-28, 2014.

EXTRACURRICULAR

- IT Coordinator, Sir Syed Global Scholar Award (<http://ssgsa.us/>)
- Google Student Ambassador 2013-14
- Chair & co-founder, AMU ACM Student Chapter 2014-15
- Mentor, Programmers' Forum, AMU 2014-15