

Pankesh Bamotra

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Education

MCDS

CARNEGIE MELLON UNIVERSITY, SCHOOL OF COMPUTER SCIENCE.
MASTER OF COMPUTATIONAL DATA SCIENCE - DEC. 2016 - GPA **3.63**.

▷ *Intro to Computer Systems.* ▷ *Machine Learning.* ▷ *Search Engines.* ▷ *Probability and Mathematical Statistics I.* ▷ *Natural Language Processing.* ▷ *Probabilistic Graphical Models.* ▷ *Multimedia Databases and Data Mining.*

B.Tech CSE

VELLORE INSTITUTE OF TECHNOLOGY. BACHELOR OF TECHNOLOGY IN
COMPUTER SCIENCE AND ENGINEERING - MAY 2013 - GPA **9.24**.

▷ *Data structures and algorithms.* ▷ *Operating systems.* ▷ *Linear algebra.* ▷ *Computer programming and problem solving.* ▷ *Digital Logic.* ▷ *Algorithm design and analysis.*

Experience

Autodesk, Inc.

SOFTWARE INTERN - BIG DATA ANALYTICS. MAY '16 - AUG '16.

Working with cloud platform team to migrate data from legacy system and ingest it into new Spark based platform

▷ *Working with AWS, Spark, Oozie, Hadoop.* ▷ *New platform aimed to tune data ingestion, transport, and fast compute layers.*

PayPal India Private Limited

SOFTWARE ENGINEER. JUN '13 - JUL '15.

Worked with Open Analytics Platform group to develop self-service database provisioning tool for analysts and developers

▷ *Refactored legacy code into a maintainable and testable stack.* ▷ *Developed plug and play solution for Qlikview and Teradata.* ▷ *Delivered SQL based solution to analyse clickstream data.* ▷ *Worked with one of the first agile teams at PayPal.*

PayPal India Private Limited

SOFTWARE DEVELOPMENT INTERN. JAN '13 - JUN '13.

Worked with seller risk management to create early warning dashboards

▷ *Developed a SQL based solution to analyse buyer account habits.* ▷ *Early warning indicator reports used by teams across NA and EMEA for fraud analysis.* ▷ *Modeled post transaction risk mitigation.*

Projects

Info Retrieval

IMPLEMENTED A SEARCH ENGINE ON LUCENE.

▷ *Supports exact match (Ranked Boolean).* ▷ *Best match using Okapi BM25 and Language model.* ▷ *Sequential dependency model.* ▷ *Query expansion.* ▷ *LeToR enabled.*

ML

BRAIN fMRI IMAGE DATA ANALYSIS.

▷ *Classification of fMRI images using C-SVM.* ▷ *Prediction of fMRI image voxels using ElasticNet Ridge Regression.*

NLP

QUESTION GENERATION AND ANSWERING SYSTEM - BEST PROJECT AWARD.

▷ *Wikipedia dataset.* ▷ *CLI interface to generate and answer questions.* ▷ *Generate semantically, grammatically, fluent questions and answers.*

Prob. Graphical models

CONTEXT GENERATIVE RECURRENT NEURAL NETWORK LANGUAGE MODEL.

▷ *Penn Treebank dataset.* ▷ *Optimized by Gensim, faster-rnnlm.* ▷ *Deep learning.*

Data mining

DATA MINING ON LARGE SCALE GRAPHS.

▷ *Social graph datasets - Epinions, Gnutella.* ▷ *SQL based algorithms - Pagerank, K-core decomposition, SVD, triangle counting.* ▷ *Pattern analysis on static and temporal graphs using power law analysis.*

Capstone

FINANCIAL PRICE PREDICTION FROM EARNING CALL TRANSCRIPTS.

▷ *In-progress.* ▷ *Predicts directional movement of stock on next trading day.* ▷ *Predicts change in stock price on next trading day.* ▷ *Analysis purely using NLP and historical stock prices.*

Technical

Advanced
Intermediate

Java 7, Spring framework
Python 2.7, Scikit-learn, Gensim, Stanford Core-NLP, R, MATLAB, C, Oracle
10g, Postgres, Hadoop, Spark, Teradata, Qlikview

Publications

IOSR Journal
(Sep '12)
IJSCE
(Nov '12)
IJARCSSE
(Dec '12)
IJAIS, FCS
(Jan '13)
IJAIS, FCS
(May '13)

SECURING GROUP COMMUNICATION IN PARTIALLY DISTRIBUTED SYSTEMS. SYMMETRIC KEY CRYPTOGRAPHY, KEY DISTRIBUTION.
SECURE TRANSMISSION OF GRAYSCALE IMAGES USING DISCRETE FOURIER TRANSFORM. IMAGE PROCESSING, SECURITY.
IMAGE ENCRYPTION USING PIXEL SHUFFLING. ENCRYPTION.
LRUD SHIFT BASED ENCRYPTION METHOD USING MATRICES. ENCRYPTION, SECURITY, LINEAR ALGEBRA.
HADOOP AND RISK ANALYTICS. ANALYTICS, FINANCE, BIG DATA.

Certifications

Coursera

Computing for Data Analysis, The Data Scientist's Toolbox, R Programming, Getting and Cleaning Data, Exploratory Data Analysis

Extra-curricular activities

Public speaking

Vice President for three terms at PayPal IDC Toastmasters and awarded for Competent Communicator milestone, area level international speech contest runners-up in 2014

Sports

Cricket, Badminton, High-altitude hiking