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.

Worked with cloud platform team to migrate data from legacy system and in-

gest it into new Spark based platform

▷ Worked with AWS, Spark, Oozie, Hadoop. ▷ New platform aimed to tune data in-

gestion, transport, and fast compute layers.

**PayPal** India

SOFTWARE ENGINEER. JUN '13 - JUL '15.

Private Limited

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.

**PavPal** India SOFTWARE DEVELOPMENT INTERN. JAN '13 - JUN '13.

Private Limited Worked with seller risk management to create early warning dashboards

> ▷ Developed a SQL based solution to analyse buyer account habits. ▷ Early warning  $indicator\ reports\ used\ by\ teams\ across\ NA\ and\ EMEA\ for\ fraud\ analysis.$  riangleright 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.  $\triangleright$  Sequential dependency model.  $\triangleright$  Query expansion.  $\triangleright$  LeToR enabled.

MLBRAIN FMRI IMAGE DATA ANALYSIS.

ightharpoonup Classification of fMRI images using C-SVM. ightharpoonup 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, Kcore 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 Java 7/8, Spring framework

Intermediate Python 2.7, Scikit-learn, Stanford Core-NLP, R, MATLAB, C, Postgres, Apache

Hadoop, Apache Spark, Apache Oozie, Apache Hive, Apache Zeppelin, AWS,

Splunk, Oracle 10g

## **Publications**

IOSR Journal Securing Group Communication in Partially Distributed

(Sep '12) Systems. Symmeteric key cryptography, key distribution.

IJSCE SECURE TRANSMISSION OF GRAYSCALE IMAGES USING DISCRETE

(Nov '12) FOURIER TRANSFORM. IMAGE PROCESSING, SECURITY.

IJARCSSE IMAGE ENCRYPTION USING PIXEL SHUFFLING. ENCRYPTION.

(Dec '12)

IJAIS, FCS LRUD SHIFT BASED ENCRYPTION METHOD USING MATRICES.

(Jan '13) ENCRYPTION, SECURITY, LINEAR ALGEBRA.

IJAIS, FCS HADOOP AND RISK ANALYTICS. ANALYTICS, FINANCE, BIG DATA.

(May '13)

## 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 trekking