

INTERESTS

Machine Learning, Computer Vision, Natural Language Processing, Data Mining, Predictive Analytics

EDUCATION

Master of Science, Data Science

2017 - 2019 (Expected)

Indiana University, Bloomington, IN

Current Coursework: Elements of Artificial Intelligence, Applied Algorithm, Introduction to Statistics

Bachelor of Technology (Honours) Chemical Engineering, 7.06/10.00

2009 - 2013

Indian Institute of Technology, Kharagpur, India

EXPERIENCE

Senior Project Associate

April 2016 - May 2017

Indian Institute of Technology, Kanpur, India

Vehicle Recognition System

Guided by: Prof. Gaurav Pandey (EE)

- Developed a software system to identify license plate using template matching framework in Python
- Employed OpenCV library for image processing: Morphological transformations, Gaussian filtering, Adaptive histogram equalization, Contour formation, Character segmentation
- Formulated rules to build an OCR for characters identification and differentiation based on the pixel arrangement
- Enhanced character matching with pre-defined templates by performing threshold scaling for image binarization
- Improved recognition success rate by 7% as compared to the existing one(83% vs. 76% ; Sample space = 1000)

Data Visualization Application

Guided by: Prof. Arnab Bhattacharya (CS)

- Developed a web-based user interactive application in PHP for real-time management and visualization of data stored in MySQL database; Implemented device responsiveness and interoperability using the Bootstrap framework
- Defined the complete database schema, configured, and deployed the same using phpMyAdmin
- Integrated Google chart API to visualize data variability in terms of distribution, trend, correlation, deviation, ratio

Senior Business Analyst

May 2015 - February 2016

Tinyowl Technologies, Mumbai, India

Food-tech start-up

- Built a logistic regression model to predict the probability of users from different clusters returning back to the platform for targeted & channelized marketing using a *glm* package in R
- Built internal dashboard to track pre-defined business metrics and trends using *shiny* package in R
- Performed k-means clustering to segment user-base based on attributes like spending behaviour, ordering pattern

Business Analyst

January 2015 - April 2015

Embibe (Individual Learning), Mumbai, India

Education-tech start-up

- Tracked and analyzed day-to-day performance of metrics to gauge user traction, marketing impacts, user engagement, and product performance for making better business decisions
- Performed cohort analysis to quantify user behaviour. Resulting inferences were used in targeted customer acquisition resulting in 23% increase in revenue within a span of 2 months

Analyst

June 2013 - December 2014

Ipsos Research, Bangalore, India

Market Research firm

- Performed Market Mix Modeling & Pricing Analysis for client specific marketing strategies in a variety of domains
- Quantified return on investments (ROI) from marketing expenditure by Regression modeling
- Awarded Spot performer of Q3-2014 for enthused performance in analytics division

SELECTED PROJECTS (More details are available on homepage)

- *Movie Recommendation System*: Used Collaborative filtering to recommend movies to similar users
- *Sentiment Analysis Tool*: Employed bag-of-words and rule-based approach to classify tweets into positive & negative
- *Kaggle Competitions*: Built prediction and classification models using Decision Trees, Random Forest, SVM, Xgboost
- *Speaker Recognition System*: Used K-means; MFCC & delta coefficients as features vector to recognize speaker

COMPUTING SKILLS

Python, R, C, Shell Scripting, MySQL, PostgreSQL, SQLite, MongoDB, NumPy, Pandas, Scikit-Learn, Matplotlib, OpenCV, MATLAB, L^AT_EX, Git, Vim, PHP, HTML, CSS, Javascript, Bootstrap, Mac OS X, Linux, Windows