

# Priyank Agrawal

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## EDUCATION

**MS in Information Systems Engineering** Northeastern University, Boston, MA Expected Dec 2017  
**Coursework:** Program Structures and Algorithm, Advanced Hadoop MapReduce Programming (ADBMS), Advances in Data Science, Data Warehousing and Business Intelligence, Data Management and Database Design, Web Development Tools and Methods, Web Design and User Experience, Application Engineering and Development (**GPA: 3.49/4.0**) (Secondary: **Data Mining Engineering**)

**BE in Computer Engineering** Gujarat Technological University, Vasad, India July 2009 - June 2013  
**Coursework:** Design and Analysis of Algorithms, Software Engineering, Web Application Development, System Programming, Compiler Design, Advance Java Technology, Distributed Systems, Parallel Processing, Operating Systems

## EMPLOYMENT

**Software Engineering Intern** The MathWorks, Natick, MA Jan 2017 - Present

- Designing and developing a RESTful application that aims to automate the process for MathWorks' account profiles.
- Designed and developed an API for the authentication team, and a RESTful web-service with an AngularJS frontend that can perform operations on tokens of production and development environments. Both applications will be used by over 50 engineers.
- Involved in requirement analysis, functional design, architectural design, development and testing stages of SDLC.
- Following Agile Scrum methodology in a test-driven environment with strict coding standards, code reviews and code optimization.
- Building a series of dynamic real-time dashboards and reports for tracking performance and usage metrics using the server log data in Splunk. Performing aggregations by querying the production data for business insights for future releases.

**Teaching Assistant** Northeastern University, Boston, MA May 2017 - Present

- Assisting students in assignments, conducting labs and grading quizzes for Data Warehousing and Business Intelligence course.

**Software Engineer** Bharat Naukri, Vadodara, India June 2014 - May 2015

- Involved in building a J2EE, Spring, Hibernate, Maven, HTML/CSS application that is being used by engineers at the company.

**Software Engineering Intern – Android** Bharat Naukri, Vadodara, India June 2012 - May 2013

- Developed an Android application which can be used to register tables and rooms in restaurants and hotels.

## ACADEMIC PROJECTS

**Machine Learning Python Models** (2017) - Implemented linear, multiple, ridge and lasso regression with gradient descent optimization and k-folds cross validation for prediction of house prices. Implemented KNN for document retrieval by calculating similarity using TF-IDF and distance between two documents using cosine. Implemented transfer learning to extract deep learning features of image-net model and trained the KNN model to perform image retrieval. Built a personalized item similarity song recommender system. Implemented logistic classifier to analyze product sentiments.

**Restaurant Recommender System** (2016) - Implemented MapReduce in Java on Yelp dataset in AWS EC2 instances to build a content based and personalized restaurant recommendation engine and visualized the outcome of the analysis.

**Sentiment Analysis with Web Scraper** (2016) - Built a web-scraper in R to fetch real time reviews from TripAdvisor and Amazon, and performed tokenization, stemming, lexicon comparison to calculate sentiment score of each review.

**Loan Applicant and Life Insurance R Models** (2016) - Implemented Naïve Bayesian and Neural Net to classify loan applicants. Also, support vector machines and decision tree regression to predict response for life insurance applicants.

**Data Integration and Visualization** (2016) - Designed a hybrid dimensional model for Microsoft Contoso DB. Implemented facts, slowly changing dimensions, and performed ETL, data transformation, error handling, source to target mapping. Created Dashboards, charts, slicers, dicers to perform trend, contribution, geographic and correlation analysis in visualization tools from data-warehouse.

**Patient HealthCare Provider DB** (2016) - Designed a logical data model with 28 entities for healthcare providers storing all patient information and built a J2EE application to show the dynamic crud operations after implementing the data model in the RDBMS.

**Other Coursework Projects** (2015 - 2016) - An internet of things Air Index Calculator using Java Swing, a Job Portal using Spring, Hibernate with crud operations and MySQL data persistence, and Data Integration/Visualization of AdventureWorks DB,

## TECHNICAL SKILLS

**Languages** - Java, JavaScript, Python, R, C/C++, SQL, HTML/CSS

**Technologies** - Hadoop, MapReduce, Spark, HBase, Pig, Hive, Cassandra, MongoDB, J2EE, Spring, Hibernate, Maven, AngularJS, ReactJS, JQuery, Bootstrap

**Tools/RDBMS** - Talend, SSIS, PowerBI, Tableau, Qlik Sense, Excel, SQL Server, MySQL, PostgreSQL

**ML Packages** - CRAN, Graphlab Create, Numpy, Pandas, Matplotlib, Scikit-learn