AKSHAY KULKARNI

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EDUCATION

NORTHEASTERN UNIVERSITY   **Boston, MA.**
Khoury College of Computer and Information Sciences   *Sep 2018 - Present*
Candidate for Master of Science [M.S.] in Data Science   *GPA : 3.714*
Related Courses : Algorithms, Data Management and Processing, Information Retrieval, DBMS
Large Scale Parallel Data Processing (MapReduce & Spark) and Supervised Machine Learning

BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI – DUBAI CAMPUS   **Dubai, U.A.E.**
B.E. [Hons] in Electronics and Communications Engineering   *Aug 2012 - Jul 2016*
Related Courses : Digital Image Processing, Communication Systems

SKILLS

Languages : Python, R, **SQL,**
Java ,Octave ,MATLAB ,Scala ,
JavaScript, HTML ,CSS/Sass

Tools & Platforms : IDEA & PyCharm,
RStudio , Anaconda, Jupyter, Tableau,
Git , MySQL, Docker, AWS, GCP

Libraries & Frameworks: Scikit-Learn,
NumPy , Pandas , TensorFlow, Keras,
SQLA , Django , Flask , DASH , RShiny,
Lucene, Spark, Hadoop

WORK EXPERIENCE

NORTHEASTERN UNIVERSITY - *Graduate Teaching Assistant*   **Boston, MA.**
CS-3200 [DBMS]   *Sep 2019 – Present*
DS-4100 [Data Collection, Integration and Analysis]   *Jan 2019 – May 2019*
- Designing coursework and assignments, evaluating student projects.
- Guiding and teaching students in-class or during office hours to help them master assignments
  and to reinforce learning concepts such as tidying ,storing and analysing data, employing modelling
  techniques - regression, clustering and other machine learning techniques in R.

PREDIKLY - *Junior Analyst*   **Pune, India.**
- Worked on generating statistics, visualizations and dashboards for projects like   *Aug 2017 - May 2018*
  Cloud based collaboration platform for CA/CPA/CS clients to manage their Practice online
  with BI Tools like Tableau and assisted in building predictive analytics solutions.

ZIO TECHNOLOGIES L.L.C - *Sales and Statistics Intern*   **Dubai, U.A.E.**
- Acquisitioned, managed and analysed product statistics/data for projects and tender   *Aug 2015 – Jan 2016*
  submissions and assisted on Systems and AV integration for large scale projects
  in Dubai for the Government of Dubai and other major sites

ACADEMIC PROJECTS

Decision Support Framework/Multi-Objective Optimization & Visualization Tool   *Jun 2019 – Aug 2019*
- Deployed a re-usable database-agnostic decision support tool with a React front-end and the core
  components developed purely in Python to enable a user to link any database.
- Implemented methods to extract and display an interactive manipulable decision matrix of values &
  calculate the Non-Dominated set of solutions to aid the user with multi-objective trade-off analysis
  and to plot a spatial interactive Pareto Frontier/Curve for the selected features or objectives

Analytical Occupation Classification on O*NET Database using *Gaussian Process Classifier*   *Mar 2019 – Apr 2019*
- Employed Gaussian Process Classifier on the O*NET database containing information on hundreds of
  standardized and occupation-specific descriptors with other models such as QDA to compare performance
  and tradeoffs to determine the best model for classifying a given occupation from the O*NET being *Analytical* in nature.

Building a complete Search Engine/ Information Retrieval Model.   *Jan 2019 – Apr 2019*
- Built a comprehensive web-crawler in Python to retrieve data from a specified wiki seed page for cleaning,
  tokenization in order to perform analysis & generate corpus text statistics. And implemented Google's PageRank
  algorithm from scratch to rank the crawled pages.
- Implemented an information retrieval model in Python and Apache Lucene, using several ranking algorithms
  such as BM25,QLM & Vector Space to rank parsed and cleaned documents, while optimizing the search engine
  by employing stopping, stemming as well as pseudo-relevance feedback algorithms, query expansion via
  Word2Vec-trained embeddings & generating summarization with Luhn's algorithm

Analysis of Human Development in India using IHDS-II dataset   *Oct 2018 – Dec 2018*
- Utilised R and its tools to collect clean and explore factors affecting human development in rural India
  in two different time frames of 2005-06 and 2011-12. Using generalised logistic regression models and
  random forest models to predict the trend of various factors on a range of indicators including factors
  affecting women's employment and agricultural / business yield