

MEHAK SIKKA

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EDUCATION

Carnegie Mellon University (CMU), Pittsburgh	Dec 2019
Master of Information Systems Management	GPA: 3.46
Coursework: Introduction to Machine Learning, Big Data and Large-Scale Computing, Practical Data Science, Data Mining, Distributed Systems, Database Management, NoSQL Database, Data Focused Python, Agile Methodology	
Thapar University, Patiala, India	June 2015
Bachelor of Engineering in Electronics and Communication Engineering	GPA: 3.32

WORK EXPERIENCE

Technology Intern, Republic of Palau	May 2019 – Present
<ul style="list-style-type: none">Represented CMU in Palau for Technology Consulting in the Global Community.Constructed a Natural Language Processing model to identify Money Laundering for the Financial Intelligence Unit.Created a web application to optimize data integration between the Financial Institutions Commission and the banks increasing the efficiency of the file sharing process by 5x.	
Consultant, Ernst & Young, New Zealand	Nov 2017 – June 2018
<ul style="list-style-type: none">Implemented models using SQL/ETL and Excel for leave payment of employees; Automated the data management workflow for client documents generating a total revenue of \$4.2M in 4 weeks.Supervised a team of 10 global interns on work procedures to improve the efficiency of data architecture models by 70%.Provided efficient data analytics solutions to manage large and complex data sets, leading teams through their technical implementations and managing global client relationships.	
Associate Consultant, Ernst & Young, Gurugram, India	July 2015 – Oct 2017
<ul style="list-style-type: none">Analyzed financial statements provided by clients and predicted future frauds using Random Forest algorithm.Designed and applied process automation on a social survey; used Excel VBA to extract result metrics increasing the efficiency by 90%; created data visualizations in Tableau to present the conclusions.	

ACADEMIC PROJECTS (CMU, Pittsburgh)

Construction of Risk Assessment Instrument (RAI)	May 2019
<ul style="list-style-type: none">Predicted the likelihood of recidivism amongst criminals by constructing a RAI using random forests with 79% specificity.Achieved a predictive improvement of 3% over an existing RAI called COMPAS across various traditional and cost-based metrics to help judges make unbiased bail decisions by synthetically up-sampling skewed data using SMOTE.	
Application to help customers choose a neighborhood in Chicago	March 2019
<ul style="list-style-type: none">Built an application in Python to help users select a neighborhood in Chicago based on their preferences; Provided custom predictive analytics for health, safety, education, price and environment indicators.Implemented the business model after extensive research of customer pain-points, the current market, competitors and revenue generation.	
Prediction of Datasets using machine learning algorithms	March 2019
<ul style="list-style-type: none">Applied Classification Modeling: decision tree-based model to predict the outputs of various datasets with custom hyperparameters such as max-depth. (Stratified Sampling, Parameter Tuning).Implemented a neural network from scratch for prediction of a given dataset; used Stochastic Gradient Descent as a method to update weights.	
Cryptography, Distributed Systems	Feb 2019
<ul style="list-style-type: none">Designed a prototype Blockchain model to grasp fundamentals such as Block Primitives and Hashing.Implemented the model on an end-to-end encrypted client-server architecture by incorporating different web service design styles to enhance interoperability and understand underlying design trade-offs.	

SKILLS

Languages:	Python, Java, SQL, R
Packages:	NumPy, Pandas, Scikit-learn, PyTorch, MLlib Matplotlib, BeautifulSoup, Word2Vec, Gensim, Keras
Technologies:	AWS, Hadoop, Hive, SparkSQL, MongoDB, Spark, Redis, Neo4j, Cassandra, Tableau, Informatica, Excel, JIRA
Functional:	Machine Learning, Data Analysis, NLP, Data Mining, Agile Methodology, A/B Testing

HONORS/ACTIVITIES

Professional Scrum Master I certification, CMU, Pittsburgh	2019
Society of Women Engineers , CMU, Pittsburgh	2018
Extra Miler Award for exceptional client service, EY, New Zealand	2018