Chiransh Gulati

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EDUCATION

University of Southern California, Los Angeles, CA **Jan 2020-Dec 2021**
Master's in Computer science **GPA 3.9/4.0**

- **Courses:** Machine Learning, Data Mining, Data Warehousing & Business Intelligence, Database Systems, Natural Language Processing, Analysis of Algorithm, Probabilistic multimodal
- **Instructional Assistant** of Discrete Methods in Computer Science at USC Viterbi School of Engineering.

Guru Gobind Singh Indraprastha University, Delhi, India **Aug 2015-Jun 2019**
Bachelor of Technology, Information Technology **GPA 4.0/4.0**

SKILLS

- Programming Languages: Python(PySpark, Pandas, SkLearn, Pandas), JavaScript, C++, Java, HTML, CSS
- Frameworks: Apache Spark, Selenium driver, Flask, NLTK
- Operating Tools: AWS(EC2, S3, CloudWatch, RDS), ETL, SAS JMP Software, Tableau
- Database: SQL, MySQL, Hadoop(HDFS), Hive
- Certifications: Quantitative Analysis(World Quant), Deep Learning Specialization

PROFESSIONAL EXPERIENCE

Marshall business School (USC) -Research Assistant **(AWS, Python, Hadoop, Machine Learning)** **Dec 2020-Present**

- Currently working on world's largest market dataset (IRI Marketing Dataset) to analyze the market macroeconomics**,** risk analytics.
- Using Predictive analytics to uncover new business consumer insights and integrate them on the most technologically advanced.
- Design AWS architecture to aggregate high volume time series data.

Genpact -Software Engineer **(Python, Machine Learning, PySpark, Spark, Hadoop, Clustering)** **Jul 2019-Dec 2019**

- Automated data entry system using unsupervised algorithms by extracting key information from millions of invoices having different shape, size & format, to help business ditch manual data entry, freeing up human labor by 40% and save more than $1M in initially.
- Developed Cognitive data capture algorithm to extract fields from multiple invoices of different types and vendors.
- Built a pipeline consisting of multiple map-reduce jobs in python using Hadoop to extract data from various sources.
- Built a script for bucketing similar type of invoices by using clustering and pattern match algorithms.

Genpact -Software Engineering Intern **(Tableau, Selenium, NLP, NLTK, Python, Flask)** **Jun 2018-Aug 2018**

- Built a tool for HR to analyze employee satisfaction based on different types of review posted online on Glassdoor, Mouthshut and twitter.
- Worked on data visualization tool tableau to build multiple dashboards to represent the data pictorially.
- Created reviews dataset by crawling on web using selenium and analyzed corpus using TF-IDF Matrix and performed topic modeling with Non-negative matrix factorization.

FreeDoctorHelpline -Android Developer Intern **(Android Studio, Microsoft Azure, rest API, XML, Java)** **Mar 2017-Aug 2017**

- Built an android application with real-time features, booking an appointment, symptom checker, Q&A forum etc.
- Tools: Android Studio, Microsoft azure, rest Api, xml, java

PROJECTS

Recommendation system for Yelp **(Collaborative Filtering, LSH, Spark, Hadoop, Python)**

- Built a collaborative and content-based recommendation system for yelp dataset to predict the rating given by users to different businesses and achieved RMSE of 0.9.
- Identified similar businesses on Yelp based on using Jaccard, Pearson similarity along with LSH in spark

Emotion and Visual Context Aware Dialogue Generation **(Python, Keras, Multimodal learning)**

- Developing a multimodal dialogue generation model which generates responses based on user's emotion (from text and face) and visual context from the image.
- Creating the model using BERT based transformer architecture for textual features and CNN for extracting visual features from the image. Both image and textual features are then fed into a LSTM based decoder to generate textual responses

Improved effectiveness of Direct Marketing using Data-Mining Business models **(JMP, Decision Tree's, KPI's, Excel, Neural Networks)**

- Implemented Decision tree models to improve the response rate of members through Direct marketing channel by identifying the target subset of the full member list to have a four-fold increase in profits

Vehicle Number Plate Detection and OCR **(python, OpenCV, OCR)**

- This involved preprocessing of obtained image, extraction of license plate region, segmentation and character recognition.
- Built a unique edge detection algorithm using OpenCV and a technique for localization, segmentation and recognition of the characters within the located plate based on OCR.
- OCR is used to recognize an optically processed printed character number plate which is based on template matching.

AWARDS

- **Won HackInNorth :** Build an application for automated tender allocation.
- **Third in National Hackathon**: Build an app for registration of candidates for any event and issue of hassle free digitally signed certificates