HIMANI SHAH

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EDUCATION:

LUDDY SCHOOL OF INFORMATICS, INDIANA UNIVERSITY May 2023
Masters Data Science 3.7 GPA
Relevant Coursework: **Explainable Artificial Intelligence, Computer Vision, Applied Machine Learning, Elements of artificial Intelligence, Social Media Mining, Applied Algorithms**

INSTITUTE OF TECHNOLOGY, NIRMA UNIVERSITY May 2020
B.Tech. Computer Engineering & Minor in Information Security 3.7 GPA

TECHNICAL SKILLS:

Programming Languages: Java, SQL, JavaScript, CSS, HTML, R, Python, Power Shell, MySQL
Web Technologies: Node JS, React JS, Databases (PostgreSQL), MATLAB, LaTeX
Data Science Tools: Pandas, Matplotlib, TensorFlow, NumPy
Miscellaneous: Confluence, SonarQube, Visual Studio, Postman, Wireshark, Git, Docker, SPSS Statistics, AWS, Cypress, Weka

EXPERIENCES:

OPTUM UNITED HEALTHCARE, HYDERABAD (Associate Software Engineer) July 2020- July2021
Tech stack: **Visual studio, IntelliJ, Cypress, GitHub, Dbeaver, Kafka Tool, Power BI, Postman**
- Worked on UI designs and its backend services, optimizing SQL queries by 17% (fetch PAFX data optimally) and analyzed data to implement business rules.
- Automated testing pipeline using Cypress and reduced testing time by 60% which enabled early release of builds.
- Under Agile software development lifecycle worked in different phases of the product delivery (Analysis, Development, Testing, Maintenance, Release activities & Documentation).
- Reduced and resolved security risks, bugs, & code smells by performing frequent code analysis with SonarQube.
- Debugged potential issues in production & development to mitigate the effect and addressed it with turnabout time of 7-8 hours.
- Actively participated in AI for All community, learned to work on fake job posting and sarcasm detection using NLTK toolkit.

WELLNESS SPACE, AHMEDABAD (Research Intern, Healthcare Analytics Role) Jan 2020- May 2020
Tech stack: **Google Colab, SPSS Statistics, Tableau**
- Analyzed effect of stress in Autonomic Nervous System (ANS), using 41 HRV parameters, ECG, and triaxial accelerometer data.
- Conducted an analysis on the 24 hours ECG Data recording of 40 individuals, using Bittium Faros 180 sensor.
- Developed script to calculate energy expenditure and the differentiation between Physical Activity (static and non-static) and Emotional Stress for multiple test subjects.
- Generated Biofeedback as a test report stating the percentage of time spent on energy utilization activities and energy recovery activities with 98.44% accuracy.
- Observed a case of stage-4 cancer patient, comparing it with healthy human using visualization.

NIRMA UNIVERSITY, AHMEDABAD (Technical Intern) May 2019- July 2019
- Predicted the FIFA team as part of course project and implemented sentiment analysis on twitter data to analyze fan's reaction on India World cup loss using **Google Colab**.
- Used **AWS** to implement load balancing and auto scaling. Obtained introductory knowledge on the working of NoSQL, Hypothesis Testing, Machine Learning, Big Data Analytics, Recommender Systems.

RELEVANT PROJECTS:

Road Trip (Google Maps) Sept 2021
- Utilized dataset containing major highway segments, distances, and speed limits of United States and corresponding latitude-longitude positions of cities and towns (has missing data).
- Calculated spherical distance using Haversine formula and handled missing data by centroid computation.
- Implemented A* search on user input will be start city, end city and cost function (segments, distance, time) to attain output as qualified as Google Maps.

Predicting Suicidal Patients during COVID-19 Dec 2021
- Retrieved data using Reddit API from r/happy, r/depression and r/suicidewatch preprocessed & tagged if suicidal or not.
- Conducted Exploratory Analysis by tokenizing, lemmatizing and devised n-grams and bag of words.
- Presented results of LDA in interactive way and achieved accuracy of 81.82% by modelling Naïve Bayes Classifier from scratch.

Video-Based Helmet and License-Plate Detection Jan 2020
- Brainstormed between two methods Convolution Neural Network (CNN) and YOLO Algorithm.
- The analysis included detection and recognition of objects on data available in the form of images, videos and real-time.
- Used CNN with VGG-16 and L-YOLO to detect the helmet only if vehicle is a motorcycle and absence of helmet will trigger the extraction of License-plate number using Optical Character Recognition (OCR) and update in MySQL database.
- Recognized text in noisy License-plate images using simple Bayes net, Hidden Markov Model and MAP inference (Viterbi).
- Used to obtain the count of any object in the dataset provided with accuracy of 87%.