ANJALI BACHANI

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EDUCATION

University at Buffalo, State University of New York January 2020 to June 2021
Master's in Computer Science

Vellore Institute of Technology July 2017 to May 2019
Master's in Computer Application

JECRC University July 2014 to May 2017
Bachelor of Computer Application
Secured 2nd Rank with a Silver Medal

RELEVANT EXPERIENCE

Axis India Machine Learning December 2018 to August 2019
Software Development Engineer Intern Jaipur, India

- Reduced website overhead by 20% by upscaling the conventional JavaScript HTML+CSS website of the company to a single page React App.
- Performed SQL data modeling and built REST APIs using NodeJS to handle HTTP requests with CRUD operations on data stored in MySQL.
- Updated, upgraded, and set up a unit test using Jest and Moc to reduce application bug reports by 17%.
- Implemented OAuth2 Security along with PKCE Flow to streamline authorization and Integrated Google Login for authentication.
- Increased website interaction by 25% using SEO Tools like Google Analytics, MozBar, and WooRank.

SKILLS

KNOWLEDGE: data structures, algorithms, web development, cloud computing, distributed systems, object-oriented design, relational databases
LANGUAGES: Java, Python, JavaScript, React.js, Node.js, SQL, Angular.js, CSS, MATLAB, C/C++, HTML, C#
FRAMEWORKS: OpenCV, Tensorflow, Pandas, D3, PySpark, NLTK, scikit-learns, NumPy, matplotlib, Keras
TECHNOLOGIES: Docker, Apache Lucene, AWS EC2, Git, JSON, GCP, Apache Spark, Apache Hadoop, Apache Solr, Jupyter Notebook
SOFT SKILLS: Meticulous, Creativity, Effective Planning, Communication, Perseverance
DATABASES: MySQL, MongoDB

PROJECT EXPERIENCE

Amazon Dynamo-style key-value storage (Java, Android, Android Studio) January 2021 to March 2021

- Implemented a simplified version of Amazon Dynamo in an android group messenger application with an easily scalable multi-threaded architecture.
- Reproduced features of Dynamo such as Partitioning, Replication, and Failure handling.
- Assured both availability and linearizability at the same time over-vigorous testing conditions reducing the maximum chance of failure to 0.001%.

Database for Medical Records (JavaScript, React, Node, MySQL, CSS, HTML) August 2020 to December 2020

- Created a real-time web-based application that optimized the recording of medical samples collected at the University's Medical Lab.
- Constructed a database for samples, shipments and facilitated lookups for the same.
- Standardized the tracking of shipments for users by providing summarized information of the sample reducing overhead by 30%.

Open IR - Information Retrieval System (Python, Angular, AWS, Solr, Lucene, CSS, D3, HTML) September 2020 to November 2020

- Devised an IR system with a corpus containing 3 million tweets in 7 languages and 25 countries on "COVID-19".
- Incorporated Location Analysis and Sentiment Analysis to better understand the public response in each country and portrayed using different Data Visualization methods like Data Maps, Timelines, and Graphs.
- Performed Latent Dirichlet Allocation for Topic modeling and applied a Faceted search on the indexed tweets by creating backend web services.

Detecting Racial Biases in COMPAS (Python, Pandas, NLTK, Jupyter Notebook) April 2020 to May 2020

- Investigated 3 Machine Learning algorithms to replace the existing COMPAS system - a tool for the judiciary to grant bail.
- Validated and reduced the Model's algorithmic bias towards Blacks and Hispanics based on recidivism and 14 other parameters.
- Enhanced a system that used Naive Bayes Classifier using optimization techniques like Stochastic Gradient Descent and Adam, also enforced Equal Opportunity across racial lines to ensure maximum fairness.

PRESENTATIONS AND LEADERSHIP

Represented VIT Vellore for work on "Forex Exchange using Big Data Analytics" at I-STEM-18 February 2019
International Conference on Science, Technology, Engineering, and Management, Kumaraguru College of Technology (KCT)

Presented a research paper titled "Drowsiness Detection using Facial Expression" November 2017
International Conference on Science, Engineering and Technology, Vellore Institute of Technology (VIT)

Student Coordinator for ISRO (Indian Space Research Organization) Exhibition April 2016
Organized and steered various events during a 3-day exhibition explored by more than 100+ schools to perceive different scale models and work carried out by ISRO scientists.

Faculty Relations Team Lead for IAESTE India (JECRC University) September 2015
Led a team of 10 people to help students connect to mentors in respective fields in different countries for guidance in specific domains.