

# ANJALI BACHANI

abachani@buffalo.edu | anjalibachani.github.io | +1 7165333462 | Buffalo, New York |  
linkedin.com/anjalibachani | github.com/anjalibachani

## EDUCATION

**University at Buffalo, State University of New York**  
Masters of Computer Science

January 2020 to June 2021

**Vellore Institute of Technology**  
Masters of Computer Applications

July 2017 to May 2019

**JECRC University**  
Bachelors of Computer Applications  
Secured 2nd Rank with a Silver Medal

July 2014 to May 2017

## RELEVANT EXPERIENCE

**Intern - Software Development Engineer**  
*Axis India Machine Learning*

December 2018 to August 2019  
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, Data Visualization, Big Data Technology

**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

## RELEVANT PROJECTS

**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 (Angular, Python, 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 technique 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  
International Conference on Science, Technology, Engineering, and Management, Kumaraguru College of Technology (KCT)

February 2019

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

November 2017

Student Coordinator for ISRO (Indian Space Research Organization) Exhibition  
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.

April 2016

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

September 2015