

# ANJALI BACHANI

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## EDUCATION

**University at Buffalo, State University of New York**  
Master's in Computer Science

Buffalo, NY  
January 2020 to June 2021

**Vellore Institute of Technology**  
Master's in Computer Application

Vellore, India  
July 2017 to May 2019

**JECRC University**  
Bachelor of Computer Application  
Secured 2nd Rank with a Silver Medal

Jaipur, India  
July 2014 to May 2017

## RELEVANT EXPERIENCE

**Amazon Web Services, Inc**  
Software Dev Engineer

Palo Alto, California  
October 2021 to Present

- Designed and implemented an automated mechanism in Jira Service to efficiently manage failed tests by automatically creating Jira tickets for easy tracking and resolution, resulting in a 50% reduction in the time required to identify and resolve issues.
- Developed and implemented a highly scalable and extensible testing infrastructure platform for the Aurora MySQL service, resulting in a 30% increase in testing efficiency and a major improvement in quality of service.
- Spearheaded the Resource Pooling project, which aimed to increase release velocity by pre-creating 50 clusters for pipeline tests to use, resulting in a 40% decrease in overall testing turnaround time.
- Optimized the logging process for test runs, resulting in a 30% increase in team productivity by streamlining the identification and resolution of issues.
- Contributed to the development of the Kermit feature in Aurora, a managed service that allows customers to leverage database sharding for improved performance and scalability, enabling efficient processing of millions of transactions and petabytes of data in a single database.

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

Jaipur, India  
December 2018 to August 2019

- 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 Mock to reduce application bug reports by 17% to double the Timely Project Delivery scores.
- 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 analysis and design, relational databases

**LANGUAGES:** Java, Python, JavaScript, React.js, Node.js, SQL, Angular.js, CSS, MATLAB, C/C++, HTML, C#, MySQL

**TECHNOLOGIES:** Docker, Apache Lucene, AWS EC2, Git, JSON, GCP, Apache Solr, Jupyter Notebook, DynamoDB, Aurora MySQL, SQS, DJS, CloudWatch

**SOFT SKILLS:** Meticulous, Creativity, Effective Planning, Communication, Perseverance

## PROJECT EXPERIENCE

**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 to enhance performance and customer experience.
- Standardized the tracking of shipments for users by providing summarized information of the sample reducing overhead by 30%.

**Open IR - Information Retrieval System (Python, JavaScript, 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" within target goal.
- 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  
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