

# VANSHIKA RAJPARIA

1994 Lakota St, Simi Valley, California ♦ +1 9254008756 ♦ [vanshikarajparia@gmail.com](mailto:vanshikarajparia@gmail.com) ♦ [Github](#) ♦ [LinkedIn](#)

## EDUCATION

**B.E. Computer Science & Msc. Biological Sciences,**  
BITS Pilani (June 2025) **CGPA: 9.01**

## TECHNICAL SKILLS& COURSEWORK

**Coursework:** Software Engineering, Database Systems, Data Structures, Object Oriented Programming, Operating Systems, Genomics, Genetics, Bioinformatics, Immunology

**Programming Languages:** Python, C++, Java, R, JavaScript, SQL, MATLAB, Bash

**Data Science:** Machine Learning, Generative AI, LLMs, NLP, Deep Learning, Data Visualization

**Frameworks & Tools:** React, MERN Stack, TensorFlow, PyTorch, Scikit-Learn, Keras, Pandas, NumPy, Git, Docker, REST APIs, Firebase, Power Platform, MongoDB

## EXPERIENCE

**Software Developer** July 2024 - Present  
ORACLE *Bangalore*

- Working in the Database Security team on the project **Generating concise summaries of Audit Insights using AI/ML**.
- Utilized Generative AI, LLMs, REST APIs, SQL and Java** to generate summaries of audit insights. The summaries are integrated within asynchronously generated audit reports in Oracle DataSafe, a feature of Oracle Cloud Infrastructure.

**Summer Research Intern** June 2023 - Aug 2023  
University of California, Los Angeles (UCLA) *Los Angeles*

- Developed an **Electronic Dental Referral Management System (EDRMS)** at the UCLA School of Dentistry using Microsoft Power Platform, to maximize dental coverage to all the schools in California.
- Designed a data model based on **ERD principles** and implemented the app's **user interface and business logic**, streamlining patient referrals and identifying trends enhancing overall oral health outcomes.

**Summer Intern** July 2022 - Aug 2022  
Aktivolabs Singapore Pte. Ltd. *Singapore (Remote)*

- Worked on Data Analytics in the healthcare domain to **predict the susceptibility of the UK population to diabetes and other chronic illnesses**.
- Conducted comparative analysis of various **predictive Machine Learning algorithms with model evaluation** to identify the optimal approach for informed healthcare decision-making.

**Summer Intern** May 2022 - July 2022  
Regional Remote Sensing Centre (RRSC), ISRO *Jodhpur (Remote)*

- Developed a project to **Detect Solar Panels using AI/ML, leveraging RCNN for image recognition**. The model could detect solar panels across the State of Rajasthan, addressing the lack of existing methods for assessing solar power harnessed.
- Learnt basics of ML and CNNs including a course - 'Basic Image Classification with TensorFlow'.

## PROJECTS

### ML Model for Influenza Virus Mutation Prediction

- Developed a ML model to predict mutation probability scores for Influenza Virus proteins - hemagglutinin and neuraminidase by performing feature engineering on **Sequence Conservation, GC content, Mutation type**, and structural information.
- Utilized a **Random Forest Regressor** to model mutation probabilities and devised a custom formula to assign **weights to features**, enhancing prediction accuracy.
- Evaluated model performance using **cross-validation and R<sup>2</sup> scoring**, and analyzed feature importance to interpret key biological drivers of mutation likelihood.

### CureCraft - Full Stack App

- Designed a **full-stack medical center management web app** using MERN with functionalities including online appointment booking, rescheduling, viewing patient history, and automated appointment reminder notifications via email/SMS.
- Implemented **dynamic search by doctor specialty using MongoDB indexing and RESTful API endpoints**, added feature to upload prescriptions for easy future access by the patient, and developed an **admin dashboard with real-time analytics and data visualization** to view overall statistics of the medical center by the admin.

### Stock Price Prediction - Data Analytics

- Performed data scraping of tweets related to HDFC bank using **ntscraper** tool and used **RoBERTa** model to carry out **sentiment analysis** of these tweets - obtaining the positive, negative and neutral scores for each day.
- Developed a hybrid **CNN-LSTM model** to predict the stock price for one month period with training data comprising of previous year's opening and closing price along with sentiment score of the tweets.

## ACCOMPLISHMENTS

**Member of Payload Team @SEDS - Honourable Mention at Spaceport America Cup 2020**

- Studied the effect of anti-microbial resistance in microgravity conditions – serving as rocket's payload.

**Qualified for INSPIRE scholarship by Ministry of Science**

- Being in top 1% of Students in the state of Maharashtra who qualify for the INSPIRE scholarship.

## POSITION OF RESPONSIBILITY

**Secretary - Synapsis, Biology Association of BITS Pilani** Aug 2022 - July 2023

**Head - Biological Payload Team @SEDS BPHC, the Rocketry Club** Aug 2021- July 2022

## PERSONAL INFORMATION

**Citizenship : United States of America**