VANSHIKA RAJPARIA

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EDUCATION

B.E. Computer Science & Msc. Biological Sciences,
BITS Pilani (June 2025)   **CGPA: 8.90**

TECHNICAL SKILLS& COURSEWORK

Coursework: Object Oriented Programming, Computer Networks, Operating Systems, Data Structures, Software Engineering, Database Systems, Microprocessors.

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 Intern   July 2024 - June 2025 (Ongoing)
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.
- Performed a comparative study by applying the various Machine Learning Algorithms to choose the optimal algorithm contributing to informed decision-making in the healthcare domain.

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

CureCraft - MERN Stack App

- Designed a medical center management web app having functionalities like online appointment booking, rescheduling, viewing past appointments, and appointment reminders 24 hours prior.
- Incorporated the search functionality based on specialty of the doctor, added feature to upload prescriptions for easy future access by the patient, and prepared a dashboard to view overall statistics of the medical center by the admin.

Mutation Prediction Model for Influenza Virus

- 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^2 scoring**, and analyzed feature importance to interpret key biological drivers of mutation likelihood.

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