JAI PRAKASH VEERLA

Data Scientist | Machine Learning Engineer | Bioinformatician

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EDUCATION

- ***Ph.D. Degree in Computer Science with specialization in Bioinformatics – The University of Texas at Arlington*** **[Aug 2021 to May 2024] 3.85/4.0 GPA**

- ***Bachelor's Degree in Computer Science & Engineering - ACE Engineering College, JNTUH, Hyderabad, India*** **[Aug 2016 - Sept 2020] 3.5/4.0 GPA**

SKILLS

Programming Languages	: Python, R, C, Java, Octave, C++, MATLAB
Web Technologies	: HTML5, CSS, PHP, JavaScript, TypeScript
Machine Learning Frameworks	: PyTorch, PyTorch Lightning, TensorFlow, Keras, Scikit-learn, NLTK, OpenCV
Database Technologies	: SQL, MySQL, MongoDB
Cloud Technologies	: AWS, Azure
Operating Systems	: Linux, macOS, Windows, iOS, Android
Software	: Visual Studio, LaTeX, SLURM, GIT, Docker, Kubernetes, Tableau, SAS, WEKA, MS Office, Adobe Illustrator, JIRA

WORK EXPERIENCE

Graduate Research Assistant, The University of Texas at Arlington **Jan 2022 - Present**

- Researching on implementing adversarial attacks on DNA Sequencing to prove and defend against the vulnerabilities of DNA Sequencers. Working on a research paper to see how effective machine learning algorithms are over alignment tools for various bacterial genes.

Teaching Assistant, Python for Data Science 2 (DATA 3402), The University of Texas at Arlington **Oct 2021 - Jan 2022**

- Assisted in building a lab and setting up a cluster using Kubernetes which increased the productivity of students by 75% to work on assignments. Conducted office hours to clarify doubts, lab sessions, grading, and guiding students on projects.

Data Analyst, Vamstar **Oct 2020 - Feb 2021**

- Supervised and trained 20 Data Analysts on Data-source Discovery - Difficulty Levels which reduced time to map data sources by 30% and improved the efficiency of the data source mapping team by 50%.
- Extracted and collected thousands of rows of data related to the products for analysis which assisted to gain important insights into the healthcare market.

Intern, DRDO, RCMA (Missiles) **Jan 2020 - Sept 2020**

- Contributed to developing "Web solutions for certification services of Indian Military Systems" in a team of 3 members under the guidance of Regional Director & Scientist 'G' of RCMA (Missiles), DRDO.
- Web Solutions for the automation of certification services of Indian Military Systems were very user-friendly and resourceful, which aided boost the use of certification services by 15%.

Machine Learning Intern, Risk Edge Solutions **Sept 2019 - Jan 2020**

- Worked on a real-time Financial Dataset consisting of 80,000 transactions to identify anomalous transactions in the dataset using outlier detection algorithms such as PYOD and Isolation Forest.

Research Intern, IIIT Hyderabad, Language Technologies Research Center (LTRC) **May 2019 - Aug 2019**

- Worked in a team consisting of 4 members at Language Technologies Research Center (LTRC), IIIT Hyderabad to assist the research on "Text Segmentation with Parallel Computing using Natural Language Processing".

TECHNICAL PROJECTS

T1-Weighted Brain Structural Image using CNN

- With T1-weighted structural image (3D NIFTI data) used CCN to predict whether the subject is a patient or healthy.

Brain Structural Connectivity and Functional Connectivity using GCN

- Using functional and structural connectivity matrices with the help of GCN to predict whether the subject is a patient or healthy.

Brain Functional Image and Functional Connectivity using RNN

- Predicted whether the subject is a patient or healthy using averaged rs-fMRI signals and fMRI ROIs connection matrix.

Lung Cancer Detection using Computer Vision with CNN

- Designed a Deep Learning Model to detect malignancy in Lung Cancer using the IQ-OTHNCCD dataset. Achieved an accuracy of 99.48%.

A CNN Model Tracking Correct Number of Sets of an Exercise

- Built a Machine Learning Model to track the number of sets of an exercise using CNN. Got an accuracy of 87.02%.

Cardiovascular Diseases Prediction

- Predicted cardiovascular diseases for a given dataset using Machine Learning Algorithms (Random Forest and SVM) with an accuracy of 86.88% and 83.6%.

Text Segmentation with Parallel Computing using Natural Language Processing

- Processing textual data of various languages by parallel computing using Natural Language Processing. This sped the processing from 14.5 mins to 3.4 mins.

e-Library Management System

- Developed an Android application integrated with Distance Sensors and Arduino for library management services which increased utility & efficiency by 50%.

ACHIEVEMENTS & CERTIFICATIONS

- Recipient of the prestigious **"Lonestar Scholarship"** and **"Silverstar Scholarship"** from **UTA**.
- Certified as a **Microsoft Technology Associate** for **Introduction to Programming using Python**.
- Volunteer at **Teach for Change** taught English to 3rd standard underprivileged government school students.
- Secured **Elite Certificate** for **Introduction to Machine Learning** offered by **IIT Madras** and **NPTEL**.