

# ROHAN SAI NALLA

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## EDUCATION

### UNIVERSITY OF COLORADO BOULDER

*Master of Science in Data Science, CGPA: 3.8/4*

Boulder, Colorado

Aug, 22 - May, 24

Coursework: Statistical Methods and Applications, Data Mining, Machine Learning, Neural Networks, Data-Center Scale Computing, Information Visualisation, .

### GITAM INSTITUTE OF TECHNOLOGY

*Bachelor of Technology (B.Tech), Computer Science and Engineering, CGPA: 8.77/10*

Visakhapatnam, India

Jul, 18 - May, 22

Coursework: Data Structures, Discrete Mathematics, Database and Analysis of Algorithms, Machine Learning, Data Mining, Data Warehousing, Operating Systems.

## SKILLS

**Programming Skills:** Python, C, C++, R, Java, Bash, HTML, CSS.

**Data Science and Machine Learning:** Tensorflow, Keras, Pandas, Numpy, Scikit-learn, Open CV, SQL, Pyspark, ETL, Kafka.

**Tools & Utility:** VS Code, KNIME, Notion, LaTeX, Adobe Photoshop, Quarto, RMarkdown, API, Docker.

**Disciplinary Skills:** Time Management, Multitasking.

## PROFESSIONAL EXPERIENCE

### Graduate Research Assistant

Boulder, Colorado

*Department of Psychology and Neuroscience, Supervisor - Dr. Lei Yuan*

Jan, 23 - Current

- Spearheaded technology and data infrastructure enhancements within the laboratory, resulting in a remarkable 60% improvement in operational efficiency.
- Designed and developed cognitive stimulus-response experiments using Psychopy, seamlessly integrated with Eyelink 1000 eye-tracking technology, facilitating precise and reliable data collection.
- Orchestrated the operation of the Pupil Lab's Invisible, ensuring a streamlined and unobtrusive data collection process for behavioral research studies.
- Constructed and meticulously documented Python pipelines and provided user-friendly instructions for GUI-based data encoding applications, enabling smoother data processing and analysis for future lab assessments.
- Pioneered the conceptualization of an automated deep learning pipeline for behavioral data collection, demonstrating a forward-thinking approach to advancing research methodologies.

### Phoenix Global Pvt Ltd

Hyderabad, India

*Machine Learning Engineer Intern*

Jun, 21 - Sept, 21

- Contributed to the project titled "Prognostic Classification of Patients with Hepatocellular Carcinoma," gaining valuable insights into Machine Learning principles and industry-standard Data Science processes, specifically the CRISP-DM (Cross-Industry Standard Process for Data Mining) framework.
- Designed and implemented a robust data analysis pipeline using KNIME, incorporating a variety of Machine Learning techniques to effectively classify patient data. This initiative demonstrated a proactive approach to solving complex real-world challenges.

## PERSONAL & ACADEMIC PROJECTS

### The Formula 1 Web Paddock

[Deployment](#)

- Developed a web application that holds real-time analytics of Formula 1 Races.
- Integrated a streamline use of the API to showcase analytics as soon as the data is available.
- Invented two perspectives into the dashboard to show analytics for potential Investors in the Sport and for the Fans.
- *Utilized technologies:* Streamlit, Python, API, ETL techniques, Web Scraping.

### COVID-19 Analysis and Prognosis Based on Pre-Conditions

[Deployment](#)

- Developed an Interactive Dashboard with real-time analytics of COVID-19.
- Incorporated the Statistics of Global Vaccine Administrations and Quantified Vaccine Efficacies.
- Fabricated a Neural Network to Predict the Likelihood of requiring either Intubation or an Intensive Care Unit.
- *Utilized technologies:* Streamlit, Python, Real-Time Data Reading, Caching, Neural Networks, Plotly.

### Data-Centric Understanding Chicago Crime

[website](#)

- Leveraged intricate analysis techniques with community area-wise discretion to uncover nuanced crime patterns, employing both supervised and unsupervised machine learning methods.
- Discovered intriguing insights through association rule mining, revealing distinct crime patterns across various community areas, emphasizing the importance of localized strategies.
- Engineered a robust neural network-based supervised classification system, categorizing crime types based on crime characteristics, enhancing crime prevention and response strategies.
- *Utilized technologies:* Python, R, API and Static Data Repositories, Association Rule Mining, Clustering, Neural Networks.

### The Anatomy of Deep Learning

- Designed a web application to maintain records of various Deep Learning experiments.
- Orchestrated the web page to Illustrate complexities of Deep Learning concepts in a visual way.
- Integrated a sandbox section to experiment with the trained models.
- *Utilized technologies:* Python, Tensorflow, Keras, PyTorch, Streamlit.

## TECHNICAL PAPERS

### Comparative Study of Reliability of Transfer Learning to Classify Plant-Based Diseases

[View Publication](#)

*International Journal of Engineering and Advanced Technology (IJEAT) – Volume-10 Issue-6*

- Analyzed various pre-trained Neural Network Architectures to classify visual representations of plant-based diseases.
- The purpose of this study was to offer a methodology for assessing crop conditions utilizing sophisticated systems to detect disease signs and intervene early.

### Deep Categorization of Blood Cells Using Depth-wise Convolutions

[View Publication](#)

*International Journal of Innovative Technology and Exploring Engineering (IJITEE) – Volume-10 Issue-12*

- Proposed a robust system that can precisely classify white blood cells based on their morphological differences.
- This research aims at alleviating the stringent requirement of manual cytological studies by supplanting them with intelligent systems.