Sahitya Kota

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# EDUCATION

## BTech Artificial Intelligence & Data Science *CGPA: 8.19 / 10 (up to 4th semester)*

VNRVJIET, Hyderabad (*2021–2025)*

**11th and 12th Standard** *CGPA: 8.76 / 10 (CBSE)*

**10th Standard** *CGPA: 9.50 / 10 (CBSE)*

Vikas – The Concept School, Hyderabad

# PROJECTS

## Full-Stack Book Data Management System

* Modernized a MERN stack project into an interactive web application provisioning **over 1000 users concurrently**.
* Streamlined the website to enable effortless management and exploration of a vast collection of books, saving library staff about **30+ hours** every week, and **reducing login times by 40%** for the user with MongoDB.
* Implemented a Responsive and Intuitive User Interface with **6 components** and **5 webpages** overall driving a substantial **65% increase in user satisfaction**
* Front-End: HTML, CSS, JavaScript, React.js
* Back End: Node.js, Express.js
* Database: MongoDB

**Drowsiness Alerting System (2023 - Present)**

* Spearheaded a collaborative machine learning project to enhance safety and **prevent 78% accidents** caused by drowsy driving.
* Leveraging a dataset of over 4000 image points, developed a model that precisely identifies user states within a 5-10 microsecond timeframe, achieving an accuracy of 87.9%.
* Tested 8+ techniques previously used and redesigned the models to eliminate errors by 2 times.
* Tools and Techniques: Video Processing, Transfer Learning, Customization, Real-Time Analysis, TensorFlow.

## Traffic Data Analysis

* Identified key correlations between 20+ location data attributes and traffic density over 10 years, applying advanced machine learning techniques while leading a team of three.
* Surveyed traffic patterns and devised data-driven strategies to optimize traffic flow, resulting in a 25% reduction in average commute time and 15% decrease in traffic congestion within urban areas.
* Achieved **over 95%** precision in validating model accuracy (utilizing metrics like mean squared error).
* Skills applied: Data Collection, Data Cleaning of dataset of 5000+ points and Data Analysis, Data Visualization using 5+ modules in Python.

## Ray Tracing Literary Research *(November 7, 2023)*

* Analysed **30+ papers**, synthesizing key insights and trends in ray tracing methodologies from diverse sources, condensing information by **80%.**
* Evaluated **5+ ray tracing implementations** for strengths, weaknesses, and innovation opportunities. Identified potential future avenues for ray tracing advancements based on reviewed literature.

# TECHNICAL SKILLS

* Data Structures, Algorithms, Database Management, MySQL, Data Analytics, Git & GitHub, Full Stack Development, Machine Learning, Linux Programming, Operating Systems, Shell Scripting

**PROGRAMMING LANGUAGES**

* **PYTHON:** Basics, NumPy, Pandas, TensorFlow, Matplotlib.
* **JAVA:** Basics, Object-Oriented Programming**.**
* **C:** Basics, Data Structures, System Calls.

**WEB DEVELOPMENT** HTML5 CSS JAVASCRIPT REACT.JS

# COURSES & CERTIFICATIONS

* Machine Learning Specialization by Stanford University & DeepLearning.AI on Coursera (3 Certificates earned by September 20, 2023).
* Cloud Computing Course Certificate (IIT Kharagpur NPTEL) - Top 5% (Silver) out of 16,686 students with 78%.
* IBM Skills Build Micro-Internship on Data Analytics: Completed a workload of 5 (1-2hr) certification courses and a data analytics project within a span of 2 weeks
* Linux Practical App Development Course and Prompt Engineering Certification of 25hours and 35 modules in total (offered by Infosys Springboard).