

# Sindura Reddy Challa

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## Education

- University of Maryland, Baltimore County** Aug 2023 – May 2025  
MPS in Data Science Grade: 3.95/4.0 GPA
- **Coursework:** Large Language Models, Natural Language Processing, Big Data Processing, Data Management, Introduction to Data Science, Ethical Issues in Data Science, Introduction to Machine Learning, Leadership in Data Science
- Vidya Jyothi Institute of Technology, India** Aug 2019 – May 2023  
B.Tech in Information Technology Grade: 8.56 / 10 GPA
- **Coursework:** Programming Languages: C, Python, Java | Machine Learning & Artificial Intelligence: Machine Learning, Artificial Intelligence, Big Data Analytics | Data Science & Engineering: Data Warehousing and Data Mining, Cloud Computing, IoT | Software Development & Design: Software Engineering, Object-Oriented Analysis and Design, Mobile Application Development | Algorithms & Theoretical Computer Science: Design and Analysis of Algorithms, Data Structures, Formal Languages and Automata Theory, Mathematical Foundations of Computer Science | Systems & Networks: Operating Systems, Computer Networks, Compiler Design, Computer Organization | Databases & Web Technologies: Database Management Systems, Web Technologies, Semantic Web and Social Networks | Legal & Ethical Issues: Cyber Laws.

## Skills

**Programming Languages:** C, Java, Python | **Data Science Libraries & Frameworks:** Pandas, NumPy, Seaborn, TensorFlow, PyTorch, Scikit-learn, Statsmodels | **Data Visualization Tools:** Tableau, Power BI, Matplotlib, Plotly | **Data Engineering Tools:** Databricks, Hadoop, Spark | **Databases:** MySQL | **Natural Language Processing:** Hugging Face | **Cloud Platforms:** AWS, Google Cloud Platform, Microsoft Azure | **Version Control and Collaboration:** GitHub | **Containerization and Virtualization:** Docker, Kubernetes | **Deployment and Model Serving:** Flask, FastAPI, MLflow | **Additional Skills:** Web Scraping, Data Ethics |

## Professional Experience

- Paper Makers, India** Mar 2023 - Jul 2023  
*Data Analyst Intern*
- Analyzed and interpreted large datasets to identify trends and insights, supporting business decision-making.
  - Utilized tools like SQL, Excel, and Python for data cleaning, processing, and visualization.
  - Assisted in developing reports and dashboards to present findings to key stakeholders.

- Knowledge Solutions India** Remote  
*Data Analyst Intern* Apr 2021 - Jun 2021
- Applied supervised machine learning techniques to build a predictive model.
  - Utilized Python libraries, including NumPy, Pandas, and Scikit-Learn, for data analysis and model development.
  - Employed data visualization techniques using Matplotlib and Seaborn to create insightful visual representations of datasets, aiding in the understanding of key patterns and relationships.
  - Collaborated with cross-functional teams to optimize data-driven processes.

## Leadership Experience

- The International Society for Optics and Photonics (SPIE), India** Nov 2019 - Nov 2022  
*Vice President, SPIE Student Chapter*
- Led the chapter in organizing events, workshops and outreach programs aimed at fostering interest in technology and encouraging collaboration among students.
  - Collaborated with faculty and professional members to facilitate seminars and networking opportunities.
  - Managed a team of student members, ensuring effective communication and smooth execution of chapter activities.

## Projects

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### Sales Prediction and Inventory Management

May 2024

- Developed a system for sales prediction and inventory management using historical sales data.
- Utilized different machine learning algorithms to compare predictions and improve accuracy.
- Implemented data preprocessing techniques to clean and prepare the data for analysis.
- Contributed to optimizing inventory levels and reducing stockouts, leading to improved business operations.
- **Technologies Used:** Python, Machine Learning, Data Preprocessing

### Global Carbon Fluxes Associated with Livestock Feed and Emissions

Mar 2024

- Analyzed global livestock-related carbon flux estimates from 2000 to 2013, focusing on emissions of methane (CH<sub>4</sub>) from digestion and manure, and carbon dioxide (CO<sub>2</sub>) from respiration and manure decomposition.
- Conducted spatial analysis of gridded data, mapping emissions at a 0.05-degree resolution to investigate the impact of land use changes on carbon dynamics.
- Applied spatial interpolation and modeling techniques to estimate emissions in data-scarce regions, improving the global understanding of carbon fluxes and supporting environmental sustainability efforts.
- **Technologies Used:** Python, Spatial Data Analysis, Data Visualization, Geospatial Mapping

### Healthcare Data Analysis and Disease Prediction

Jan 2024

- Conducted a comprehensive analysis of healthcare data to identify key factors influencing patient outcomes.
- Used data visualization tools to present insights and trends.
- Developed machine learning models to predict the likelihood of heart disease based on patient medical history and lifestyle factors.
- **Technologies Used:** Python, Data Visualization (specify tools if necessary)

### Federal Insights: Unveiling Trends in U.S. Contract Awards

Dec 2023

- Proficient in acquiring and processing large-scale datasets from SAM.gov and FPDS using Python and pandas.
- Utilized Python data science libraries, including Pandas for data manipulation and Matplotlib and Seaborn for data visualization.
- Contributed valuable business insights, enabling informed decision-making by extracting actionable recommendations from the analyzed federal contract data.
- **Technologies Used:** Python

### Audiobook using Python

Oct 2023

- Utilized a range of Python libraries, including Pillow for image reading, PyMuPDF for PDF-to-image conversion, pytesseract for optical character recognition (OCR), and pygame for audio playback.
- Implemented voice-controlled functionality to enable users to interact with the audiobook system, including searching for news updates and controlling playback, enhancing accessibility and user experience.
- **Technologies Used:** Python