Vittanala Sai Kushal

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Education

Vellore Institute of Technology Andhra Pradesh, IN
B.Tech in Computer Science and Engineering | CGPA: 8.42/10 *Jul 2022 – Jun 2026*

- **Coursework:** Data Structures & Algorithms, Operating Systems, OOP, Software Engineering, Networks

Technical Skills

Programming: Python, SQL, C, Java, JavaScript
Data Science Libraries: Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn
Machine Learning: Linear Regression, Logistic Regression, Decision Trees, Random Forest, KNN
Computer Vision: OpenCV, Image Processing, TensorFlow, Object Detection
Data Visualization: Power BI, Tableau, Excel, Charts and Graphs
Tools & Databases: Jupyter Notebook, Git, MySQL, MongoDB, VS Code
Cloud Platforms: AWS, Azure

Experience

Brightix IT Solutions Remote
Data Analyst Intern *Jul 2025 – Sep 2025*

- Completed training in SQL queries, Python scripting, Tableau visualizations, and Power BI dashboards.
- Cleaned and prepared datasets using Excel and Python, removing duplicates and handling missing values.
- Created bar charts, line graphs, and pivot tables to track sales performance and customer trends.

Projects

Traffic Congestion Prediction (Machine Learning) *Oct – Dec 2024*

- Built traffic prediction model using Random Forest and Decision Trees on 50K+ records achieving 89% accuracy.
- Cleaned and preprocessed data using Pandas, handling missing values, converting timestamps, and creating features like hour of day and day of week to improve predictions by 25%.
- Developed web interface using TypeScript to display congestion levels and visualized patterns with Matplotlib heatmaps.

Technologies: Python, Scikit-learn, Pandas, NumPy, Matplotlib, TypeScript, Jupyter Notebook

Retail Store Sales Analysis (Data Analytics) *Aug – Oct 2024*

- Analyzed 25K+ sales transactions using SQL queries and Python to identify top-selling products, profit margins, and regional performance patterns.
- Cleaned data in Excel by removing duplicates, fixing date formats, and used Pandas for grouping by category and region to calculate totals and averages.
- Built Power BI dashboard with bar charts, pie charts, and tables showing monthly sales trends and seasonal patterns.

Technologies: Power BI, SQL, Python, Pandas, Excel, Matplotlib

Face Recognition System (Computer Vision) *Feb – Apr 2025*

- Built face detection and recognition system using OpenCV and TensorFlow achieving 97% accuracy with real-time processing at 30 frames per second.
- Preprocessed images by resizing, converting to grayscale, normalizing pixel values, and applied augmentation techniques like rotation and flipping during model training.
- Reduced incorrect matches by 70% by adjusting detection thresholds and improving image quality for low-light conditions.

Technologies: Python, TensorFlow, OpenCV, NumPy, Image Processing

Research Publications

- Co-authored research paper at ADSSS Conference 2024: *"Prediction of Kidney Disease and Urinary Disease using Machine Learning"* with 92.31% accuracy using Random Forest classifier.
- Cleaned patient medical records, handled missing data, and selected important features using correlation analysis.

Certifications

- **Oracle Certified:** OCI 2025 Generative AI Professional
- **AWS Certified:** Cloud Practitioner, Cloud Foundations, Cloud Architecting
- **Microsoft Certified:** Azure Data Fundamentals
- **MongoDB University:** Intermediate Database Administration