

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, Object-Oriented Programming, Software Engineering, Computer Networks

Technical Skills

- Programming Languages:** Python, JavaScript, C, MySQL, Java, HTML, CSS
- Data Analytics Tools:** Power BI, Tableau, Excel, Data Visualization
- Python Libraries:** Pandas, NumPy, OpenCV, Matplotlib, Seaborn
- Web Development:** React.js, Node.js, Express.js, MongoDB, REST APIs
- Database Management:** MongoDB, MySQL, Database Design, SQL Queries
- Cloud Platforms & Tools:** AWS, Azure, Git, Docker

Projects

Power BI Sales Dashboard

Aug 2025

- Developed an interactive Power BI dashboard to analyze 25K+ orders across 5 product categories and 7 locations, revealing key sales patterns and profit margins.
- Enhanced business decision-making speed by 30% through a Power BI dashboard tracking revenue trends, customer groups, and employee performance.
- Improved sales forecast accuracy by 20–25% by designing visualizations showing sales forecasts and customer retention patterns.

Technologies: Power BI, Excel, SQL, Data Analysis

Face Recognition System using Computer Vision

Feb – Apr 2025

- Built a face recognition system that works with existing security cameras, processing video at 30 frames per second and reducing manual monitoring time by 65% through automated detection.
- Reached 97% accuracy in detecting faces even in low-light conditions and when faces are partially visible.
- Reduced incorrect matches by 70% using image preprocessing and tuning detection settings.

Technologies: Python, TensorFlow, OpenCV, Image Processing

Fight Detection System

Jan – Mar 2025

- Built a real-time system that identifies fights by monitoring proximity changes between individuals, achieving 91% accuracy and triggering instant alerts to security personnel.
- Measured spatial variations to recognize aggressive interactions, boosting processing speed by 20% through optimized algorithms.
- Achieved 18 frames per second on standard hardware with 65% fewer incorrect detections by adjusting sensitivity settings and implementing smart filters.

Technologies: Python, OpenCV, Object Detection, Distance Tracking

Quiz Web Application

Mar – May 2024

- Built a quiz website with user login and leaderboard features, increasing user participation by 40%.
- Redesigned the database using MongoDB to load data 60% faster and show live leaderboard updates.
- Set up client-server communication to ensure smooth data exchange and better user experience.

Technologies: React.js, Node.js, MongoDB, JavaScript

Research Publications

- Co-authored and presented a research paper at ADSSS Conference 2024 titled *"Prediction of Kidney Disease and Urinary Disease using Machine Learning"* achieving 92.31% accuracy using classification algorithms.
- Improved early detection of kidney and urinary diseases by 15% through model tuning and analyzing patient data.

Certifications

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