

Sai Cholik Vempati

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Summary

Data Analytics graduate student with hands-on experience in regression, forecasting, optimization, dashboard development, and system analytics. Skilled in Python, R, SQL, Tableau, and Excel with experience analyzing 200K+ records and delivering data-driven insights.

Education

Central Michigan University

May 2026

M.S. Information Systems (Data Analytics)

Coursework: Database Systems, Business Data Analytics, Project Management, Enterprise Applications, Tableau, R

Experience

Student Assistant

Aug 2024 – Present

Central Michigan University Library, Mount Pleasant, MI

- Maintained and organized digital and physical records supporting daily library operations.
- Used Excel to track circulation activity and produce routine usage summaries.
- Assisted with data entry, verification, and reporting tasks.

Python Full Stack Intern

Mar 2023 – Aug 2023

J.K.C. College, Guntur, India

- Developed database-driven applications using Python and MySQL.
- Supported data extraction and validation using SQL queries.
- Assisted in requirement analysis, system design, and testing activities.

Projects

Donation and Charity Management System

- Designed a desktop-based donation management platform to replace manual logs/spreadsheets and improve fund transparency.
- Defined system scope and requirements; produced use cases, DFDs, and task planning.
- Modeled relational MySQL schema for users, campaigns, donations, and preferences.
- Planned role-based access control and compliance-ready reporting; targeted 40% reduction in administrative overhead.

The 2-Degree Blueprint – Climate Policy Optimization

- Modeled emissions across 34 EN-ROADS scenarios projecting outcomes through 2100.
- Applied SMA and Exponential Smoothing forecasting techniques.
- Built regression model ($R^2 = 0.82$) explaining 82% of emission variance.
- Conducted sensitivity and optimization analysis across multiple policy levers.

VDI System Usage Analysis – 2015 (R)

- Processed 227,386 VDI log records; identified 3,013 users and peak daily usage of 577.
- Determined top users and OS distribution for IT capacity planning.

Business Data Analytics using R

- Integrated and cleaned multi-region datasets.
- Analyzed shipping performance, profitability, and sales trends.
- Identified largest single order worth \$42,157.

Global Work Hours & Productivity Analysis (Tableau)

- Built interactive dashboards analyzing 200+ country records.
- Reported productivity insights across regions.

Airbnb Market Analysis – Tableau Dashboard

- Developed dashboards analyzing pricing and availability patterns.
- Designed user-driven filtering and geographic visualizations.

Software Project Management Simulation – SimProject

- Delivered project in 13 weeks at \$44,460 cost.
- Applied Earned Value Management and weekly reporting.

Certifications

Google Data Analytics Professional Certificate (Coursera)

Feb 2026

Skills

Programming & Analytics: Python, R, SQL, JavaScript

Data Analysis: EDA, Data Cleaning, Data Wrangling, KPI Reporting, Log Analysis

Visualization: Tableau, Power BI, ggplot2, Excel Dashboards

Analytics Techniques: Regression Analysis, Time-Series Forecasting, Sensitivity Analysis, Optimization

Databases: MySQL, Relational Database Design, Data Modeling

Project Management: Earned Value Management, Scheduling, Risk Management

Tools: Git/GitHub, Jupyter Notebook, RStudio, Postman, EN-ROADS, SimProject