# Chetan Injavarapu

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## Education

**Rutgers University** **Jan 2024 – Dec 2025**
*Master's of Science in Data Science (CGPA: 4.0)* *Camden, NJ*

**GITAM University** **Jun 2019 – Apr 2023**
*Bachelor of Technology in Computer Science (CGPA: 7.93)* *Visakhapatnam, AP*

## Experience

**ACME GRADE** **May 2022 – Jul 2022**
*Data Science Intern* *Bengaluru, Karnataka*

- Applied Python, data analysis, data visualization, and machine learning techniques in a classroom setting to gain hands-on experience through real-world projects.
- Built a movie recommendation system using collaborative filtering and content-based techniques to demonstrate practical application of machine learning and data analysis..

## Projects

**Global Food Security and Environmental Impact Analysis**

- Developed a comprehensive Pandas pipeline to merge and clean multi-source datasets (FAOSTAT, World Bank WDI, CO2 & CH4 emissions, food price inflation) across 180+ countries from 1980–2023.
- Engineered custom metrics like Food-Affordability Index and Nutrient Supply Score to quantify food security, inequality, and climate vulnerability.
- Uncovered strong links between food price inflation and emissions trends, showing that in low-income regions, methane-heavy nations had 25–40 % higher inflation volatility.
- Built time-series and geospatial visualizations (line plots, choropleths, scatter grids) to reveal 3 major global food crises and classified countries into risk tiers for nutrition sustainability.

**California EV Growth vs. Air Pollution (PM2.5)**

- Analyzed the relationship between electric vehicle (EV) adoption, charging infrastructure growth, and PM2.5 pollution across 58 California counties using spatial, environmental, and demographic data.
- Integrated shapefiles and air quality datasets (EPA, ARB) to map EV and pollution density; performed geospatial joins and reverse-geocoding to create a unified GeoDataFrame.
- Revealed counties with high EV adoption and charger density showed up to 30% lower PM2.5 concentrations, suggesting environmental benefits of clean transport.
- Built interactive dashboards using folium, ipywidgets, and geopandas, enabling county-wise pollution and EV infrastructure visualization for policy recommendations.

**Bitcoin Price Forecasting with Sentiment & LSTM**

- Built a multivariate forecasting model to predict Bitcoin price by integrating sentiment data from Twitter, Reddit, news (GNews), Google Trends, and historical price from Yahoo Finance.
- Engineered daily rolling sentiment features using VADER, normalized and aligned all sources into a unified dataset for training ARIMA and LSTM models with walk-forward backtesting.
- Improved forecasting accuracy with sentiment-enhanced models, showing Reddit and news signals as strong predictors of short-term price movements in volatile crypto markets.

## Technical Skills

**Languages**: Python, SQL,
**Technologies/Tools**: Power BI, Microsoft Excel, Git
**Data-Related Skills**: Machine Learning, Data Visualization, Data Analytics, Data Mining, Geographic Information Systems (GIS)

## Other Experience(Campus and Community Involvement)

**GITAM Esports SIG** **Visakhapatnam, Andhra Pradesh**
*Design Coordinator* *Dec 2022 – Apr 2023*
**GITAM Esports SIG** **Visakhapatnam, Andhra Pradesh**
*Head of Operations* *Aug 2022 – Dec 2022*
**GUSAC (Gitam University Science and Activity Centre)** **Visakhapatnam, Andhra Pradesh**
*Technical and Non-Technical Member* *Jun 2020 – Jan 2022*

## Certifications

**IBM Data Science professional Certificate** Coursera