

Raghav Khurana

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ACADEMIC QUALIFICATIONS

- Master of Science in Business Analytics and Information Systems GPA - 3.93
University of South Florida, Tampa, FL 08/2022 – 12/2023
- Bachelor of Technology in Electronics and Communication Engineering
SRM University, Delhi, India 07/2015 – 04/2019

TECHNICAL SKILLS

- Programming and Scripting languages: **Python**, **R Studio**, **JavaScript**, Java, C++, Node.js, ISML, HTML, CSS
- Analytical Methodologies: **Regression**, Supervised/Unsupervised Learning, Decision Trees, Clustering, **Statistical Modelling** (GLM, Poisson, Multi-level, Panel Data, Survival, Non-Linear, Classification, Time series, ARIMA), Tobit, Beta Regression, Logistic Regression, ANOVA, Neural Networks, **Deep Learning**, Transformers, **Machine Learning**, BERT
- Database and Libraries: Oracle SQL Developer, SQLite3, MongoDB, Cassandra, NumPy, **Pandas**, **Keras**, SciKit-Learn
- Visualization and Analytics Tools: Weka, SAS E-Miner, **Tableau**, **Power BI**, Google Analytics, QlikSense, Tabpy, Plotly, Seaborn
- Miscellaneous: **Git**, JIRA, Adobe Analytics, Office, **ETL**, Jupyter notebook, Flask, Anaconda, **TensorFlow**, Matplotlib, **Pytorch**

ACADEMIC PROJECTS

Image classification with **Deep Learning (CNN, ResNet50, HuggingFace)**

- Developed a robust Convolutional Neural Network (CNN) model for image classification and independently compared the results with a pre-trained ResNet50 from hugging face.
- Improved model performance through **hyperparameter tuning**, employing evaluation metrics like confusion matrices, accuracy, loss for comprehensive analysis.

Analyzing life expectancy disparities across US states with **Regression Modeling (Fixed Effects, Multi-Level)**

- Integrated and feature-engineered diverse datasets (2019-2023) from census reports, county health rankings, state health data, using R Studio and Tableau Prep Builder to discern factors contributing to the variance in life expectancy (66.8 to 86.8 years) across U.S. states.
- Conducted correlation analysis, identified key variables, and employed fixed effects and multi-level models to estimate variable impacts. Interpreted coefficients and furnished detailed recommendations on factors significantly influencing reduced life expectancy.

Demand forecasting using **Time Series Modeling (ARIMA, Prophet)**

- Collected, compiled, cleaned, and normalized 5 years of survey data from a local food pantry and employed exploratory data analysis, regression models and time series techniques including ARIMA and Prophet to derive insights from data.
- Presented comprehensive trends, spanning daily, weekly, yearly, and **projected future scenarios, utilizing Tableau, Python**, and R Studio for impactful visualization.

WORK EXPERIENCE

Graduate Teaching Assistant, University of South Florida, Tampa, FL

08/2023 – 12/2023

- Assisted graduate students and instructors for course “Analytical Methods of Business”, covering statistical concepts such as **Hypothesis testing, confidence intervals, GLM, ANOVA, and Logistic Regression** using R Studio.

Research Assistant, University of South Florida, Tampa, FL

05/2023 – 08/2023

- Analyzed the State of Florida’s CAPE Act for the Digital Information Technology grant and assisted in textbook research.
- Developed a **SQLite3 ETL pipeline using Python**, implementing **Kimball’s dimensional data modeling**.
- Identified and created facts and dimensions, identified relevant data-warehouse features to prepare data for further analytics and identify patterns across school districts, teacher compensations, and technology accessibility.

Software Developer (Sys. Engineer), TATA Consultancy Services (TCS), Indore, India

08/2019 – 06/2022

- Contributed to key features including **recommendation engine, search bar and filtering for an e-commerce site using JavaScript, Node.js**, ISML, jQuery, and Java on Salesforce Commerce Cloud.
- Integrated and optimized **analytical tools (Google, Adobe Analytics)** for user interaction tracking.
- Enhanced and optimized daily batch job and catalog data dump algorithms, reducing job failures by 36%.