

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 August 2022 – December 2023
- Bachelor of Technology in Electronics and Communication Engineering
SRM University, Delhi, India July 2015 – May 2019

WORK EXPERIENCE

Graduate Teaching Assistant, University of South Florida

August 2023 – December 2023

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

Research Assistant, University of South Florida

May 2023 – August 2023

- Analyzed the State of Florida’s CAPE Act for the Digital Information Technology grant, **developed and implemented an SQLite3 ETL pipeline using Python using Kimball’s dimensional data modeling** approach.
- Contributed to the research and development of the Fundamentals of Information Technology Textbook published by Digital Commons @ University of South Florida.

E-commerce Software Developer (Sys. Engineer), TATA Consultancy Services (TCS)

August 2019 – June 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.
- Spearheaded digital analytics initiatives, employing tools such as **Adobe and Google Analytics** to measure and optimize **post-login digital sales, checkout funnel, and user interaction tracking**.
- Enhanced and optimized daily batch job and catalog data dump algorithms, reducing job failures by 36%.
- Utilized **A/B testing to streamline website flow, analyze marketing campaign results** and reduce checkout flow choke points.
- Leveraged robust research, analytics, and data-driven insights to **tailor client experiences, drive full-funnel productivity, and enhance client engagement**.

PROJECTS

Image classification with Deep Learning (Convolutional Neural Network, ResNet50, HuggingFace)

- Developed a robust Convolutional Neural Network (CNN) model for image classification with an accuracy of 99.94% 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, and loss for comprehensive analysis.

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

- Employed Fixed Effects and Multi-Level models to analyze life expectancy variations among U.S. states between 2019-2023, **integrating diverse datasets** with R Studio and Tableau Prep Builder. Identified key variables, conducted **correlation analysis**, and interpreted coefficients to provide comprehensive **recommendations for addressing factors influencing** the variation in life expectancy (66.8 to 86.8 years).

Demand forecasting using Time Series Modeling (ARIMA, Prophet, PowerBI, Tableau)

- Applied regression and **predictive modeling techniques** to forecast demand and optimize product recommendations using 5 years of web captured customer survey data and presented comprehensive past and **projected future trends**, utilizing **Tableau, PowerBI**, and R Studio for impactful visualizations.

SKILLS

- Programming/Scripting languages: **Python, R Studio, JavaScript**, Java, C++, Node.js, ISML, HTML, CSS
- Analytical Methodologies: Supervised/Unsupervised Learning, Decision Trees, Clustering, **Statistical Modelling**, Neural Networks, **Deep Learning**, Transformers, **Machine Learning**, BERT, Computer Vision, Large Language Models, Generative AI
- Database & Libraries: Oracle SQL Developer, SQLite3, MongoDB, Cassandra, NumPy, **Pandas, Keras**, SciKit-Learn
- Visualization & Analytics Tools: Weka, SAS E-Miner, **Tableau, Power BI**, Adobe Analytics, TensorFlow, Pytorch, Seaborn
- Miscellaneous: **Git**, JIRA, Google Analytics, Office, **ETL**, Jupyter, Flask, Anaconda, QlikSense, Matplotlib, **Plotly, Tabpy**