

# RAHUL AGARWAL

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## EDUCATION

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University of Minnesota, Carlson School of Management, Minneapolis, MN  
**Master of Science in Business Analytics**

August 2022

BITS Pilani Hyderabad Campus, Hyderabad, Telangana, India  
**Bachelor of Engineering (Honors) – Electronics and Electrical Engineering**

August 2018

## EXPERIENCE

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**AIDoubledot | Cognirel Technologies**, Bengaluru, India

December 2019 - June 2020

Machine Learning Engineer

/ *Python* / *TensorFlow* / *Spacy*

- Ideated and Developed Java Error Classifier for Education Platform: Coordinated with business stakeholders and engineering teams, to develop an RNN based classifier, giving relevant prompts helping 50K+ students learn java; achieved a 97% accuracy
- Knowledge Graph-Based Question Answering Bot using NLP: Prototyped scalable chatbots for business of multiple domains using web-scraping, semantic segmentation, and Recurrent Neural Networks

**Indus Valley Partners**, Noida, India

June 2018 - November 2019

Associate Software Engineer - Product

/ *C#* / *JavaScript* / *React* / *SQL*

- Responsible for developing, improving, and maintaining the full stack of *Reconciliation Software*
- Led data migration of multiple clients (150M+ records) from different platforms (SQL, MySQL) to single in-house SQL server for multi-tenant patch, saving storage costs for small business clients
- Leveraged structured event handling in JavaScript, multithreading in C# and SQL query optimizations, enhancing performance of rendering the reconciliations dashboard by 40%
- Led a 3-person team which ideated surrogate architecture to combine repetitive month-end jobs into regular reconciliation process, saving database space by 75% and staff effort by 34%
- Spearheaded development of an in-house monitoring tool for multi-tenant clients, streamlining monitoring of reconciliation jobs for the platform teams, using React and C#

## DATA SCIENCE PROJECTS

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- **Customer Transaction Prediction:** Built an ensemble model consisting of CNN and LightGBM to predict customer transactions from Kaggle competition data, matching top 50 scores with an AUC of 0.924
- **Sentiment Analysis:** Developed a classification model for a workforce optimization company utilizing 57K voice calls data with XGBoost; demonstrating value of voice features along with textual parsing
- **Customers Segmenting:** Presented insights into customers segments to an airline, supporting membership marketing campaigns, involving 3M+ PNR numbers by employing exploratory analysis using K Prototype clustering & Principal Component Analysis
- **Multivariate Linear Regression:** Researched song features such as valence, tempo and genre to quantify their impact on streaming numbers, performing multivariate linear regression analysis on 1M+ songs
- **A/B testing:** Performed test to measure the causal effect of online advertising for a video service provider, with respect to the frequency ads were played on; identified the websites with more odds of purchase
- **Difference in difference estimation:** Determined the causal impact of ads on number of clicks for a footwear retailer using DiD analysis; estimated an ROI of 286% of sponsored ads above organic ads
- **Propensity Score Matching:** Estimated the effect of interventions in patient progression between steps of bone marrow transplant process for transplant registry; found a 27% decrease in conversion

## SKILLS

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**Techniques:** Machine Learning, Hypothesis Testing, A/B Testing, Data Structures & Algorithms, Statistical Analysis, Exploratory Data Analytics, Big Data Analytics, Full Stack Development, NLP

**Tools:** Python (Pandas, NumPy, Scikit-Learn), R, C++, C#, SQL, JS, React, Neo4j