

# Rajat Singh

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## EDUCATION

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|---|---------------------------|
| • <b>Master of Science in Business Analytics and Artificial Intelligence</b>                            | <b>01/2025 to 12/2026</b> |
| University of Texas at Dallas, TX   |                           |
| Relevant Coursework: Business Analytics with R, Advanced Statistics, Applied Machine Learning, Big Data |                           |
| • <b>Bachelor of Technology in Civil Engineering</b>  | <b>07/2021</b>            |
| Manipal Institute of Technology   |                           |

## SKILLS

- Programming & Databases:** Python, R, SQL (PostgreSQL, MySQL, SQL Server), MongoDB, HiveQL
- Business Intelligence & Visualization:** Power BI, Tableau, Excel (Pivot Tables, Macros, Lookups), Streamlit, Jupyter
- Statistical & Analytical Techniques:** Regression Analysis, Hypothesis Testing, A/B Testing, Experimental Design, Causal Inference
- Machine Learning & Artificial Intelligence:** Predictive Modelling, Natural Language Processing (NLP), Deep Learning
- Certifications:** AWS Certified Cloud Practitioner (In Progress), Oracle Database SQL Certified Associate

## EXPERIENCE

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|---|---------------------------|
| <b>Junior Data Scientist</b>  | <b>01/2022 to 12/2024</b> |
| <b>Softpro India Computer Technologies</b>  |                           |
| • Developed and deployed predictive models using Python and SQL to identify student churn patterns, achieving a 15% reduction in attrition and improving retention strategy effectiveness.                            |                           |
| • Built and implemented recommendation systems to personalize course offerings based on behavioural and enrolment data, resulting in a 10% increase in cross-course registrations.                                    |                           |
| • Collaborated with cross-functional teams (engineering, product, and content) to design and execute A/B testing and statistical experiments (t-tests, regression analysis) to optimize features and user experience. |                           |
| • Performed feature engineering and data preprocessing on LMS activity logs and demographic datasets, enhancing model performance and boosting prediction accuracy by 12%.  |                           |
| • Deployed dashboards and KPI reports via Power BI and Tableau for senior stakeholders, improving visibility into engagement, retention, and performance metrics.   |                           |

## PROJECTS

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|---|----------------|
| <b>Voice-Based Parkinson's Disease Detection, AIMD Presentation Night (2nd Place Winner)</b>  | <b>03/2025</b> |
| • Developed an AI-powered voice analysis system using Python, Librosa, and Scikit-learn to detect early signs of Parkinson's disease with 87% model accuracy.                                     |                |
| • Applied supervised machine learning algorithms (Logistic Regression, Random Forest, SVM) for classification and optimized model performance through cross-validation and hyperparameter tuning. |                |
| • Presented results in a competitive analytics showcase, earning 2nd place out of multiple research teams judged by industry and academic experts.  |                |

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| <b>GenAI Financial Analyst, HackAI 2025 (LTIMindtree Challenge)</b>   | <b>04/2025</b> |
| • Designed and implemented a Retrieval-Augmented Generation (RAG) pipeline using GPT-4.0 to extract and summarize boardroom-level insights from 100+ page annual financial reports with precise page-level citations. |                |
| • Developed metadata tagging and ESG risk identification frameworks to highlight material risks and eliminate noninformative corporate text, improving insight accuracy and compliance reporting.                     |                |
| • Delivered a functional GenAI prototype that automated extraction of actionable business insights, improving analysis speed by 60% and reducing manual review effort for financial analysts.                         |                |

## ACHIEVEMENTS

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| • Awarded the Dean's Excellence Scholarship at the University of Texas at Dallas for academic distinction. |
| • Secured 2nd Place at AIMD Presentation Night for developing a Parkinson's Detection AI project.          |