MRIDUL KHANNA

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CAREER SUMMARY

Master's in Computer Science (Data Science & AI) at the University of Sydney with 2 years as a Software Engineer at **Bank of America**. Skilled in Python, SQL, Power BI, Tableau, and Cloud platforms. Experienced in Data Analysis, Machine Learning, Statistics, and Data Visualization, delivering predictive models and dashboards that enable data-driven decision-making and business impact.

TECHNICAL SKILLS

Programming & Frameworks: Python, R, SQL, Java, Spring Boot, REST APIs, Git, JUnit, Postman, OpenAPI/Swagger, OpenCV, MuleSoft, JSON
Data Science & Analytics: Statistics, Data Wrangling, Machine Learning, Deep Learning, Generative AI, Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn, Selenium, Power BI, Tableau, Excel, Google Analytics
Cloud & Systems: GCP (BigQuery, Cloud Storage, Vertex AI), AWS, Jenkins, Bitbucket Pipelines

EXPERIENCE

BANK OF AMERICA - *Software Engineer* — Gujarat, India — *June 2022*–June 2024

- Engineered core modules for the **Net Banking platform (39M+ daily users),** powering secure document exchange, e-signatures, and automating customer request workflows to operations, strengthening backend scalability.
- Built and optimized **REST APIs** (Spring Boot) and **SQL pipelines**, improving reliability and accelerating release cycles by raising **unit test coverage +40% (JUnit),** reducing production defects and improving time-to-market.
- Developed and optimized MuleSoft integrations and **ETL pipelines** across multiple migration projects, designing APIs and automating data workflows; improved reliability of high-volume data flows and reduced release delays.
- Recognized with **5 Bronze Awards** for project delivery and entrusted with directing a **$2,000 CSR grant** to NGOs**,** demonstrating both technical excellence and social leadership**.**

VAH VAH INSTITUTE PVT. LTD - *Business Analyst Intern* — Bengaluru, India — *Nov 2021–May 2022*

- Boosted **sales conversion by 30%** by analyzing multi-channel marketing performance and optimizing lead targeting using **Google Analytics and Data Studio**, enabling more effective campaigns and measurable revenue growth
- Automated interactive **dashboards** and **end-to-end reporting pipelines** (Python, BigQuery, Data Studio), reducing manual effort by **50%** and accelerating reporting cycles, while enabling real-time, data-driven decision-making.sn

CODING NINJAS - *Data Science & Machine Learning Teaching Assistant* — New Delhi, India — Feb 2021– Apr 2021

- Mentored students on **700+** Python, SQL, and ML queries, resolving project challenges, accelerating issue resolution, and earning a **4.9/5 overall rating** from learners.

UNIVERSITY OF SYDNEY – *Senior Buddy, Women in Engineering* — Sydney, Australia — Feb 2024 – Present

- Guided international students' transition into university life through mentorship, academic support, and career orientation, fostering inclusion in **STEM** and strengthening their academic and professional development.

TECHNICAL PROJECTS

Credit Risk Modeling – Occupation-Finance Analysis

- Delivered reliable **repayment capacity predictions** by occupation to support lending strategies, analyzing **26k+ financial records** with **Python** (pandas, scikit-learn) and ensemble methods (**XGBoost, Random Forest, Decision Trees**).
- Applied **feature engineering**, **outlier handling**, and advanced **model optimization** (hyperparameter tuning, L1/L2 regularization), achieving **97.7% accuracy, 0.998 AUC-ROC, and 94.7% F1-score**, demonstrating both technical rigor and business relevance.

AdSnap – AI-Powered Ad Banner Generator

- Engineered a **real-time AI pipeline** integrating **LLM** and OpenCV to automate marketing creative generation combining AI-driven slogans, adaptive layout rendering, and contrast-aware design optimization to deliver visually consistent, high-quality marketing assets.
- Produced **50+ production-ready creatives in <0.3s each**, showcasing a **scalable, low-cost AI solution** that scaled SME advertising campaigns.

Premature Mortality Risk Analysis – U.S. County

- Integrated and analysed **multiple health and socioeconomic datasets** (covering 3,003 U.S. counties) using **R** (multiple regression & decision tree models) to predict **premature mortality risk factors** and uncover patterns across diverse populations.
- Identified **income inequality and smoking prevalence** as key predictors, achieving **Adj. R^2=0.656 and RMSE=63.34**, providing insights for **data-driven healthcare planning, policy design, and targeted resource allocation.**

EDUCATION

UNIVERSITY OF SYDNEY — Sydney, Australia
Master's in Computer Science (Specialization in Data Science & Artificial Intelligence) — *June 2024 – June 2026*

VELLORE INSTITUTE OF TECHNOLOGY — Vellore, India
Bachelor of Technology in Computer Science and Engineering; (CGPA: 8.83/10) — *July 2018- July 2022*

PUBLICATIONS

Khanna, M. (2023). *Exploring the IoT Data Analytics Landscape: An Extensive Study. International Journal for Research in Applied Science & Engineering Technology (IJRASET)*, **11**(9). https://doi.org/10.22214/ijraset.2023.55912