SIMRAN KARAMCHANDANI

U.S. Citizen

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https://linkedin.com/in/skaramchandani | https://github.com/simkaramchandani01/Projects-Completed.git

OBJECTIVE

Graduate Data Science student at The University of Chicago with a professional background in biotechnology industry. Seeking opportunities to apply analytical skills and machine learning techniques in data-driven environments.

WORK EXPERIENCE

Vertex Pharmaceuticals, *Boston, MA* — Jan 2022 – Present

External Manufacturing Operations Senior Specialist — May 2024 – Present
- Provide hands-on support at CDMO sites, overseeing manufacturing operations to ensure alignment in production standards in preparation for drug commercialization. Troubleshoot on-floor issues as needed.
- Facilitate tech transfer by reviewing technical documentation and managing quality events to ensure compliance.

Manufacturing Operations Specialist (Shift Lead) — Feb 2023 – May 2024
- Led shift operations, delegated responsibilities, and acted as SME for process operations and event triage.
- Developed Power BI Dashboard tracking Manufacturing safety and quality events to improve process efficiency.

Manufacturing Operations Senior Scientific Associate — Jan 2022 – Feb 2023
- Executed GMP aseptic and bioreactor operations for Type I Diabetes program in Grade A/B environment.
- Supported tech transfer to new facility via material readiness and execution of qualification runs.

Takeda Pharmaceuticals, *Lexington, MA*

Service Delivery and OCM Specialist Intern — Jun 2021 – Dec 2021
- Utilized Power BI to develop a KPI Dashboard for the Enterprise Data Platform and Products (EDPP) team.
- Constructed user-interface dashboards through Power Apps for Tier I and Tier II QC teams at Los Angeles site.

PROJECTS

University of Chicago — Jul 2023 – Jun 2025

Skills: Machine Learning (Supervised Learning), Data Pipeline, PyTorch, TensorFlow, Tableau, Python, SQL, R

Lease-to-Own Pricing Strategy (Capstone): Won "Best in Show" in Winter 2025 Capstone Showcase
- Segmented customers based on purchasing behavior and patterns of engagement with lease-to-own program with goal to optimize pricing decisions and drive long-term customer value.

Predictive Modeling & Data Analytics:
- Developed ML models in Python to assess Type II Diabetes risk, analyze audio features for music success, and predict gym membership churn based on user behavior.
- Conducted statistical analysis in R-Studio using regression, ANOVA, and PCA to identify key factors influencing housing prices and market trends.
- Leveraged SQL to manipulate, sort, group, and summarize large datasets, while also analyzing relationships within data using database schemas.

SKILLS & SYSTEMS

- Programming: Python, SQL, R, Machine Learning Algorithms, LLM, MATLAB/Simulink, Linux Bash, Java
- Systems: Tableau, Power BI, Veeva Vault QMS, Laboratory Information Management System (LIMS), MES
- Certifications: Green Belt Six Sigma, Yellow Belt Six Sigma, Agile Scrum

RELATED COURSEWORK

Statistical Analysis, Python for Data Science, Data Mining Principles, Linear & Non-Linear Models, Machine Learning & Predictive Analytics, Data Engineering Platforms for Analytics, Time Series Analysis and Forecasting, Data Visualization

EDUCATION

- **University of Chicago**, M.S. Applied Data Science, **GPA:** 3.96/4.0 — Jul 2023 – Jun 2025
- **Northeastern University**, M.S. Chemical Engineering, **GPA:** 3.7/4.0 — Aug 2021– Dec 2022
- **Syracuse University**, B.S. Bioengineering and Neuroscience, **GPA:** 3.5/4.0 — Aug 2017– May 2021