Tu Nguyen

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TECHNICAL SKILLS

Programming & Analysis: SQL (joins, CTEs, window functions), Python (Pandas, NumPy), R, Jupyter Notebook
Statistical Methods: A/B Testing, Hypothesis Testing, Regression (Linear & Logistic), Predictive Modeling, Time Series Analysis, Statistical Inference
Data Visualization & Storytelling: Tableau, Power BI, Looker Studio, Excel (PivotTables, Charts, VLOOKUP, Macros), PowerPoint, IBM Cognos Analytics, AWS QuickSight
Database & Data Engineering: Snowflake, PostgreSQL, MySQL, DBT, Data Modeling, ETL Development
Big Data & Cloud Platforms: Google BigQuery, AWS (S3, EC2, RDS), Spark
Machine Learning & Deep Learning: Scikit-learn, PyTorch, Tensorflow, Transformer, NLP, SVM, Computer Vision, Principal Component Analysis (PCA)
Collaboration & Agile Tools: Jira, Confluence, Microsoft Office Suite, Google Workspace
Soft Skills: Data Storytelling, Critical Thinking, Risk Awareness, Trend Analysis, Report Automation, Cross-functional Collaboration, Clear Communication with Technical & Non-Technical Audiences, Problem-Solving, Attention to Detail, Time & Deadline Management

WORK EXPERIENCE

Data Analyst Intern   **Remote – Toronto, ON**
Job Buddies   *April 2024 - February 2025*

• Extracted and analyzed over 500,000 rows of cross-platform data using **Python**, **SQL**, and **R** from website logs and social media channels; conducted exploratory analysis to uncover content consumption trends and audience behavior patterns that supported programming and product decisions.
• Produced recurring bi-weekly performance reports in **Excel** using **PivotTables and VLOOKUP** across platforms including TikTok, Instagram, Google, and Facebook Ads, delivering insights that boosted user engagement by **30%**.
• Built and maintained interactive dashboards in **Power BI** and **Tableau** to monitor campaign outcomes, engagement KPIs, and competitive trends—**improving targeting by 30%** and **reducing manual reporting time by 40%**.
• Collaborated with cross-functional stakeholders in marketing, product, and business development to define KPIs, integrate multi-source data, and present insights—resulting in a **25% improvement in reporting clarity and decision-making alignment**.
• Demonstrated **intellectual curiosity** and **critical thinking** by adopting **emerging analytics tools**, assessing their **business impact**, and designing **innovative solutions** to complex data challenges. Identified **data quality and process risks** through deep analysis, and effectively communicated findings to both **technical teams** and **non-technical executives**—bridging gaps and driving **data-informed**, **risk-aware decision-making** across the organization.

PROJECTS

Project Lead – Student Dormitory Allocation
Rutgers University - New Brunswick   *October 2023*
• Led a cross-functional team to implement a custom dorm room assignment algorithm using Python to prioritize affordability and accessibility for over **2,000 students** across **300 dorm rooms**.
• Managed a dataset of **10,000+ rows**, ensuring accurate assignment of rooms based on student preferences.
• Improved room assignment satisfaction by **15%**, with the algorithm ensuring **98% of students** were assigned rooms that met accessibility and budget needs, increasing fairness by **10%** compared to the serial dictatorship method, using metrics such as match rate and student preference satisfaction to assess the effectiveness and fairness of the outcomes.

Redistricting and Gerrymandering New Jersey Congressional Map   *November 2023*
• Led the development of a redistricting algorithm using Python to create fair congressional maps, handling **TIGER shape data** with over **100,000 rows** of precinct-level population data.
• Integrated compactness metrics like **Polsby-Popper** and improved proportionality by **0.71%** and competitiveness by **7.71%**. Addressed minority representation and achieved a balance between population equality and political competitiveness.
• Optimized algorithmic performance by refining map-generating processes, reducing runtime from **over 1 hour to 10 minutes**, enabling more effective iterations and improvements in district compactness and population equality.

Twitter Data Analysis   *March 2023*
• Conducted **sentiment analysis** on public figure tweets using Python, Pandas, and the VADER lexicon, analyzing trends and public perception across **10,000+ tweets**.
• Applied **Principal Component Analysis (PCA)** for dimensionality reduction, uncovering keyword associations and patterns, improving data interpretation by **30%.**
• Developed detailed visualizations using Jupyter Notebook, effectively communicating engagement metrics and sentiment trends.
• Leveraged **machine learning techniques** to enhance insights, increasing model accuracy by **15%.**

LEADERSHIP AND EXTRACURRICULAR ACTIVITIES

Data Science Club   *September 2022 – May 2024*
Club Member   **Rutgers University**
• Successfully organized and participated in Professional Panels, Information Sessions for Data Science Courses, Collaborative Ask-Me-Anything (AMA) sessions, and social events, creating a vibrant and knowledge-sharing environment.

EDUCATION

Rutgers University   **New Brunswick, NJ**
B.S. in Computer Science, Minor in Data Science   *August 2024*
Relevant Coursework: Data Structures, Machine Learning Principles, Statistical Inference for Data Science, Design & Analysis of Computer Algorithms, Regression Method, Data Science Capstone Project.

Certifications:
• IBM Z Xplore - Concepts - IBM Systems Intermediate (IBM)   *April 2022*
• AWS Educate Introduction to Cloud 101 (AWS)   *July 2024*
• IBM Data Analyst Professional Certificate (Coursera)   *September 2024*
• HackerRank SQL (Basics, Intermediate, Advanced)   *October 2024*