

Tanvi Nikhil Shroff

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Graduate student in Computer Science from the University of Rochester with 1 year of industry experience. Passionate about creating solutions to solve complex business problems. Adept in fostering cross-functional collaboration and driving project success through communication and strong technical expertise in data science.

EDUCATION:

University of Rochester, Rochester, New York

August 2022 – May 2024

Master of Science, Computer Science (Data Science)

GPA: 3.83 / 4.0

Coursework: Computational Statistics, Data Mining, Time Series Analysis, Statistical Machine Learning

Savitribai Phule Pune University, Pune, India

August 2018 – May 2022

Bachelor of Technology, Information Technology

GPA: 3.80 / 4.0

Courses: Machine Learning, Advanced Machine Learning, Business Intelligence

Awarded the '**Cummins – Excellence Award**' as the Best Outgoing Student Award for 2021-2022

SKILLS:

Languages: Python, R, SQL, Java, C++, PowerQuery

Technologies: Tableau, Git, JIRA, Google Sheets, Databricks, MLflow, Jupyter Notebook, PowerPoint, Excel

Libraries and Frameworks: PyTorch, PySpark, Tensorflow, NumPy, Pandas, Matplotlib, NLTK, scikit-learn

Statistical Methods: Hypothesis Testing, ANOVA, ROC curve

Machine Learning Algorithms: Regression, Random Forest, Gradient Boosting, XG Boost, Clustering, Forecasting

WORK EXPERIENCE:

Data Analyst Intern, Paychex

September 2023 – December 2023

- Discovered opportunities for revenue **optimization** and identified **trends** by analyzing customer behavior data.
- Developed key **actionable** recommendations and **presented** to the stakeholders for business growth.
- **Optimized** complex **SQL** queries by eliminating view dependencies and streamlining joins reducing runtime by 50%.
- **Automated** data insertion from Excel to MySQL Server using Python and streamlined data integration process using **Git**.
- **Collaborated** with Sales, Marketing, and Data Engineering teams to ensure seamless data integration and data accuracy.

Data Warehouse Intern, University of Rochester

June 2023 – August 2023

- Led an **end-to-end** model development process with multiple partner engagements and advanced analytical methods.
- Developed multiple **Tableau** dashboards to monitor multiple model performances ensuring comprehensive oversight of model efficacy.
- Fostered strong **collaboration** with **cross-functional** teams to implement the predictive model, ensuring smooth integration with Cognos, Denodo, and Oracle SQL systems.

Data Science Intern, Women in Data Science

May 2021 – July 2021

- Analyzed consumer complaints for electronic devices by global companies using **Advanced Excel** and **SQL**.
- Designed an automated web scraper for extracting >1MM customer reviews, performed EDA using **Python**, and visualized sentiments using **Tableau**.
- Implemented **topic modeling** to identify common complaints and provided solutions, reducing complaints by 10%.

Founder, The Lavender Whisk

June 2020 – June 2022

- Managed advertising, inventory planning, and finances as the founder of a bakery startup.
- Analyzed product-level **time-series** data and social media trends to design profitable bakery products using **Excel**.

RESEARCH & ACADEMIC PROJECTS:

Justified Representation in Multi-Winner Approval Voting, University of Rochester

- Employed **algorithmic design** to ensure computational effectiveness in implementing Justified Representation.
- Conducted empirical studies using **inferential statistics** and mathematical theories to explore multi-winner approval voting.

CITI Bikes Forecasting Model, University of Rochester

- Developed an end-to-end **pipeline** for a bike-sharing system using **Databricks**, **PySpark**, and real-time **structured streaming**.
- Built an **FB prophet forecasting** model to predict hourly net bike change for a station.
- Developed a real-time monitoring application utilizing **Git** and **MLflow** for model tracking and registry.

English to Indian Sign Language, Savitribai Phule Pune University

- Led a team of 4 to generate a 3D avatar with hand signs using speech-to-text API and phrase re-ordering.
- Leveraged **NLTK** python library to implement **tokenization** and **lemmatization** for text analytics.
- Accelerated the inference latency by 500%, by caching the SiGML files containing HamNoSys notations.

PUBLICATIONS:

- Shroff, Tanvi, *et al.* "Literature Review on Machine Translation Systems for Sign Language Generation." International Conference on Data Management, Analytics & Innovation. Springer, 2023