

Nischal Subedi

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EDUCATION AND HONORS

University of Delaware

Masters in Applied Statistics, GPA: 4.0

Newark, DE

May 2020

- **Graduate Teaching Assistant (Applied Statistics I):** Developed materials, graded assignments, and mentored students

PROFESSIONAL EXPERIENCE

Home Partners of America, Inc

Data Scientist

Chicago, IL

June 2021 - Present

- Developed **dynamic pricing system** using time-based benchmarks and survival model for on-market properties, integrated into the weekly workflow of regional team, resulting in **20%** increase in monthly leasing rates and reduction in review time by **half**.
- Designed **rent classification framework** using rule-based algorithms that uncovered and mitigated biases in leasing team's and in-house model's estimates, resulting in **20%** improvement in overall pricing accuracy.
- Implemented **sentiment classifier** with map visualization hosted in **AWS QuickSight** dashboard for home tour feedback, enhancing the Turnover team's workflow, boosting overall **CSAT** scores by **35%**, and featured in Blackstone meetings.
- Streamlined **data science report generation workflow** by designing an AWS-based EventBridge + Lambda architecture with CI/CD framework for automated scheduling, reducing manual tasks for data scientists by half.
- Collaborated with data engineers to **host leasing reports on AWS QuickSight** dashboard, which were frequently referenced by stakeholders, enhancing data-driven decisions, and boosting leasing efficiency.
- Partnered with leasing, software, and data engineering teams to develop **market monitoring system**, incorporating web scrapers for competitor insights, MLS data for broader market analysis, and agent insights to guide critical leasing strategies.

Open Avenues, Inc

Data Science Fellow

Boston, MA

July 2024 - Present

- Directed course on developing housing price prediction model using **XGBoost**, with an emphasis on cloud integration.
- Led EDA, feature engineering, hyperparameter tuning, & deployed model on **AWS SageMaker** with **SHAP** for interpretation.

Barclays, Inc

High Risk Account Analyst

Wilmington, DE

Jun 2020 – May 2021

- Maintained a **logistic regression** model predicting high-risk accounts, monitored data for drift, and ensured model performance remained accurate and aligned with compliance standards.
- Automated monthly business reporting scripts in Python, streamlining processes and reducing recurring manual effort by **40%**.

PROJECTS AND LEADERSHIP

Challenged Leasing Modeling

(Home Partners of America, Inc)

Chicago, IL

Jul 2024 - Sep 2024

- Engineered **anomaly detection system** using **Isolation Forest** to identify challenged properties, incorporating neighborhood, property, and application-level data, resulting in a **70%** disposition rate among recommended properties.
- Designed a machine learning pipeline utilizing **PCA** for dimensionality reduction, **KNN** for missing data imputation, and **GMM** for threshold optimization, enhancing anomaly detection performance.

Intern Project Supervisor

(Home Partners of America, Inc)

Chicago, IL

Jun 2024 - Aug 2024

- Served on the intern interview panel, streamlined the onboarding process by 2 days, and guided summer intern project to develop a **market monitoring system** that involved detailed market-level reports and cross-functional collaboration.

Research Intern

(University of Auburn)

Auburn, AL

May 2018 - August 2024

- Developed a statistical method for evaluating product lifetime performance of **Rayleigh-distributed** components under progressively censored conditions, aiding manufacturers in assessing product quality and reliability ([paper](#)).

SKILLS AND CERTIFICATIONS

Skills: Python (NumPy, pandas, matplotlib, seaborn, folium, nltk, scikit-learn, lifelines, Streamlit, Plotly), **PostgreSQL**, **SAS**, **AWS** (EC2, S3, Sagemaker, ECS, Fargate, Redshift), **Docker**, **Git**, **Excel**

Certification: AWS Machine Learning Specialty, AWS Certified Developer, Society of Actuaries: Exam P, SAS Certified Statistical Business Analyst - Regression and Modeling, SAS Advanced Programming Professional