

# Nischal Subedi

[nis.sub100@gmail.com](mailto:nis.sub100@gmail.com) | 302-607-8726 | [in](https://www.linkedin.com/in/nischal1/) linkedin.com/in/nischal1/ | [github.com/Nischal1011](https://github.com/Nischal1011)

## EDUCATION AND HONORS

### University of Delaware

Masters in Applied Statistics, GPA: 4.0

Newark, DE

May 2021

- **Graduate Teaching Assistant (Applied Statistics I)**: Developed materials, graded assignments, and mentored students
- Accredited Graduate Statistician (**GStat**) by the American Statistical Association, 2025

## 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 and deployed conversational AI chatbot, using **LangGraph** for dialogue management and **Google Gemini** for natural language understanding, to automate property inquiries with a **Pandas Query Engine** converting natural language to data queries, reducing manual query efforts by 40% and enhancing end-user value.
- 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.
- Built anomaly detection system for challenged properties using **Isolation Forest** with **GMM** thresholding, **PCA**-driven optimal feature reduction, and **KNN** for imputation, leveraging neighborhood, property, and application data to achieve 70% disposition rate.
- Led summer intern project that included serving on the interview panel, streamlining intern onboarding, and supervising the development of **market monitoring system** with detailed market-level reports.

### 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 **80%**.

## NOTABLE PROJECTS

### Book Recommendation System

Dec 2024

- Engineered an AI-powered book recommendation system leveraging **OpenAI embeddings**, **Pinecone vector database** for efficient similarity search, **LangChain** for natural language processing, and **Gradio** for interactive user interface, delivering personalized book recommendations.

### Research Intern Manuscript

Aug 2019

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

## SKILLS & CERTIFICATIONS

**Skills/Tools:** **Machine Learning:** Python (NumPy, pandas, scikit-learn, XGBoost, SHAP, Streamlit, Plotly, lifelines), Keras, MLflow; **Deep Learning (including LLMs):** PyTorch, HuggingFace, LangChain, LangGraph, OpenAI API, Google Gemini, Transformers; **Statistical Analysis:** Python (statsmodels, lifelines), A/B testing, Excel, SAS, R, SQL (PostgreSQL, MySQL); **Big Data & Distributed Computing:** Databricks, PySpark; **Cloud Platforms:** AWS (EC2, S3, SageMaker, Lambda, ECS, Fargate, Redshift); **Visualization & Geospatial Analysis:** matplotlib, seaborn, Plotly, Power BI, folium, GeoPandas

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