# Fatima Kiyani

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#### **OBJECTIVE**

Motivated and skilled data scientist with a strong foundation in mathematics, statistics, and machine learning. I aim to contribute to innovative projects in AI development, focusing on advanced retrieval-augmented generation models. My passion lies in leveraging data-driven insights and cutting-edge algorithms to solve complex challenges and deliver impactful results.

#### **EDUCATION**

MS Data Science (Ongoing) CGPA: 3.5/4.0 . National University of Sciences and Technology (NUST)

- · Relevant courses:
  - Generative AI and its Applications: In-depth study of LLMs, transformers, GANs, diffusion models, and prompt engineering.
     Completed a research project on Generative AI, resulting in an IEEE-formatted report.
  - Big Data Analytics: Proficient in big data technologies including Hadoop, Apache Spark, and applications in text and healthcare analytics.
  - Computer Vision: Expertise in image processing, camera models, stereo vision, and GANs. Completed a research project with a focus on computer vision techniques, documented in an IEEE report.
- Other courses taken: Machine Learning (Programming-intensive and conceptually rich), Tools and Techniques for Data Science (Data
  analysis techniques and machine learning implementation), Mathematical Methods for Data Science (Mathematical foundations for ML
  algorithms), Bayesian Inference (Probabilistic modeling and statistical learning), Time Series Forecasting (Predictive modeling for
  sequential data)

## Bachelors of Science in Mathematics CGPA: 3.74/4.0 . National University of Sciences and Technology (NUST)

I have done a wide range of courses ranging from abstract and pure mathematics to applied mathematics and Statistics. I was among
the top students in my program. My grades in courses pertaining to statistics were mostly A's, such as Introduction to Statistics and
Probability Theory. I have also shown potential our Data Science electives, especially on tasks pertaining to statistical analysis.

#### **PROFESSIONAL EXPERIENCE**

# Century Apparels Pvt Ltd

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June 2022 - July 2022

- Intern
- Proficient in Microsoft Office Suite for financial data analysis and reporting.
- Conducted market research and developed data-driven insights for strategic decision-making.

## **NUST Science Society**

#### **Executive of Finance**

Jan 2021 - Apr 2022

- Assisted project managers in planning and executing various projects, ensuring adherence to project timelines and deliverables.
- Monitored project budgets, tracked expenses, and prepared financial reports to ensure cost-effectiveness and adherence to financial guidelines.

#### **Shifa International Hospital**

Intern

July 2018 - Aug 2018

• Gained interpersonal skills through volunteer work, surveying, and distribution of services.

#### **RESEARCH PROJECTS**

## **Generative AI Research Project**

- · Description: Investigated LLMs, GANs, diffusion models, and prompt engineering.
- Outcome: Authored a research report in IEEE format, detailing findings and methodologies.

## **Computer Vision Research Project**

- Description:
  - Designed a framework leveraging BLIP for the automated generation of pathology reports from Whole Slide Images (WSIs).
  - Implemented patch extraction and OCR to ensure precise image-text alignment.
  - Enhanced report accuracy and efficiency, validated by superior BLEU, ROUGE, and METEOR scores.
- Outcome: Authored a research report in IEEE format, detailing findings (literature Review) and methodologies.

# SKILLS

- Programming Languages: Python, R
- Tools and Technologies: Hadoop, Apache Spark, TensorFlow, MATLAB
- Statistical Analysis: Machine Learning, Data Visualization, Bayesian Inference
- Soft Skills: Data Analysis, Problem Solving, Report Writing

#### **COMMUNITY SERVICE**

- Ration Drive Volunteer: Assisted in food distribution and surveying for Chadar.
- Street School Program: Biweekly teaching of computer and mathematics to underprivileged children.