# Syed Ahmed Taimoor

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## EDUCATION

**North Carolina State University**                                             Raleigh, USA
*Master of Science in Computer Science*                                   *Expected May 2025*
Relevant Courses: Software Engineering, Parallel Systems, Efficient Tensor Computations

**Lahore University of Management Sciences**                          Lahore, Pakistan
*Bachelor of Science in Computer Science*                                      *May 2023*
Relevant Courses: Natural Language Processing, Machine Learning, Data Mining, Computer Vision, Software Engineering

## TECHNICAL SKILLS

**Languages**: Python, C/C++/C#
**Tools**: VS Code, Google Colab, Jupyter, Git, Slack, NSight Systems, Selenium
**Libraries**: NumPy, pandas, TensorFlow, Keras, CUBLAS

## EXPERIENCE

**Graduate Research Assistant**                                                August 2023 –
*North Carolina State University*                                   *Raleigh, North Carolina*

Designing scalable and more efficient Deep Learning algorithms with respect to space and time complexity using Tensor optimizations.

- **Hypergraph Convolution:** Optimizing global convolution for spectral hypergaph neural networks using kernel optimizations based on profiling traces.

**Research Assistant**                                          September 2022 – May 2023
*Technology for People Initiative*                                           *Lahore, Pakistan*

Design of an interactive, virtual reality museum in Unity, using Computer Graphics tools for digital preservation of historical sites in Pakistan. This work serves as the foundational work for large-scale digital preservation through interactive media at LUMS.

## PROJECTS

**Hypergraph Dataset Compilation** | *Python, C++*                      May 2024 – Present
- Surveyed current research and work on Hypergraph Neural Networks for large-scale datasets
- Constructing large scale image classification datasets for testing inductive hypergraph neural networks

**LLM Privacy Concern detection pipeline** | *Python, OpenAI, Selenium*     August 2023 – December 2023
- Created a detection pipeline for privacy concerns in VR/AR/XR human generated text using ChatGPT-3.5
- Collected classification, rationale, themes, and quotational evidence using **prompt engineering**
- Created large-scale datasets for analysis using web-scraping from publicly available reviews and discussions

**Analysis of crimes in Boston** | *Python, Google Colab, Git, Latex*      February 2023 – May 2023
- Pre-processed the open-source Boston crime dataset for analysis
- Performed Exploratory Data Analysis on the cleaned dataset to identify the spatial and temporal nature of the crimes
- Identified frequent patterns and clustering in the dataset using **Data Mining** algorithms including the Apiori and FP-growth algorithms
- Compiled the results and suggested improvements in a detailed LaTeX report