

Umair Ayub

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EDUCATION

New York University

Master's in Data Science

New York, NY

Expected Graduation: May 2024

Relevant Coursework - Data Science, Probability & Statistics, Optimization and Computational Linear Algebra

National Institute of Technology Srinagar

Kashmir, India

Bachelor's in Computer Science & Engineering (CGPA: 8.61)

Graduated: July 2022

Relevant Coursework - OOP, Database Management, Java, AI, Deep Learning, Unix & Shell Programming

SKILLS

Programming Languages: Python, Javascript, SQL, C++, Solidity.

Libraries, Frameworks & Tools: Numpy, Pandas, Matplotlib, Seaborn, Tableau, Scikit-Learn, Keras, TensorFlow, PySpark, PyTorch, React, Node.js, Express, AWS, Excel, Microsoft Office, PowerPoint, GitHub.

WORK EXPERIENCE

New York University

New York, NY

Teaching Assistant (Programming tools for the Data Scientist Course)

September 2022 - Present

- Guiding an undergraduate class of **43** students by explaining the course material and clearing their doubts.
- Assisting the professor in creating & grading assignments, quizzes, and exams.

NIT Srinagar

Srinagar

Teaching Assistant (Deep Learning Course)

August - December 2021

- Supervised and managed a class of **64** students by providing instructions, leading discussions, and grading exams - attained a class average of **95%** for completed assignments and exams.
- Implemented weekly discussions and mini-projects that encouraged out-of-the-box critical thinking, resulting in enhanced course outcomes.

Feynn Labs

Remote

Machine Learning Intern

August - October 2021

- Supervised a team of **4** interns to perform market segmentation analysis on the tourism industry of India to find regions that increased the profits by **8%** for a hostel chain.
- Performed Exploratory Data Analysis using **Seaborn** and **Matplotlib** to explain the findings to the senior executives efficiently.
- Designed a Machine Learning model that predicts the profitability of different regions with **80%** precision.

BITS Pilani

Rajasthan

Research Intern

January - July 2021

- Co-Authoring the national bestselling book "[Machine Learning - A Comprehensive approach](#)" which has sold over **4000** copies.
- Designed a Convolutional Neural Network using Python's **TensorFlow** and **Keras** libraries that was aimed at training miniaturized car models for automated driving.
- Collected **50,000+** data samples using **Scrapy** and **Beautiful Soup** for the training and deployment of the Convolutional Neural Network.
- Investigated different e-Healthcare methods, presenting findings in a book chapter available on Taylor and Routledge titled [A Taxonomy of e-Healthcare Techniques and solutions: challenges and future directions](#).

PROJECT

A Novel Deep Learning Approach for Classifying Traffic Signs

- Developed a Deep Learning model using the (GTSRB) dataset that used Convolutional Neural Network along with **AutoAlbument** & **Spatial Transformer (STN)**.
- AutoAlbument uses reinforcement learning to automate the search for optimal image transformation policies and STNs results in models which learn invariance.
- The model had **92,397** parameters, was trained in under **3 hours**, and achieved a validation accuracy of **99.86%** which was comparable to the SOTA.