

HOZAIFA OWAISI

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EDUCATION

University of North Carolina at Pembroke, Pembroke, NC

Bachelors of Science, Computer Science, May 2025

Activities and Clubs : I am part of the AI, and CS clubs on campus, as well as resident advisor/building lead. I also tutor some cs courses sometimes. As mentioned previously I am also working on a research project at the university while working on some personal projects.

Wake Technical Community College, Raleigh, NC

Associates Transfer Program, Computer Science , Aug 2022

Activities and Clubs: I was the president and founder of the computer science club, and a software team lead for the solar cross country car project. I was also an executive member of the Muslim Student Association.

SKILLS

Programming/Scripting Languages: Python, Java, TypeScript, HTML, CSS, MySQL/PostgreSQL

Frameworks and tools: Git, Pandas, Pytorch, Tensorflow, React, ExpressJS, SpringBoot, MongoDB, NodeJS, AWS, Spark, Redis, Docker, Tailwind CSS.

Soft Skills: Leadership, Problem Solving, Collaboration, Quick Adaptability, Goal Oriented, Deliverables/Time Management.

EXPERIENCE

Research Apprentice

University of North Carolina System, Pembroke NC, September 2023 - Feb, 2025

- Conducted end-to-end research (literature reviews, coding, and technical writing) under advisor guidance.
- Developed scalable DNN models using Ray Tune to predict washout for blood clot detection in COVID patients from computational fluid dynamics data.
- Delivered two synopsis posters, one conference presentation, and a publication in a Scopus-indexed journal.
- Currently preparing a second paper on scaled implementation for big data training, along with optimization/scheduling methods and roadmap solutions.
- The Paper: https://iacis.org/iis/2024/4_iis_2024_136-142.pdf

Internet Routing Integrity Project with The NSA Lab (LAS @ NCSU)

North Carolina State University, Aug 2024 - Jan 2025

- A full-stack project in collaboration with engineers and data analysts at LAS to explore the bulk ARIN dataset and visualize key points related to RPKI information and other visual elements (including a CISA sector tree map classification). Our team built a website for policymakers to access organization-specific RPKI adoption data along with aggregated statistics and visualizations. We presented our findings in a report and at NIST and NCSU synopsis.
- Stack: Angular, ExpressJS, MongoDB, hosted on AWS.
- My role involved full-stack development, managing team outcomes, building frontend elements, backend REST-API integration, and collaborating with the data team to clean, process, and build ELT/ETL pipelines.. This project can be found here: <https://ncsu-las.org/2024/11/internet-routing-integrity/>

Jr Volunteer Author/Editor

Secjuice.com Non-Profit, Remote, Aug 2018 - July, 2022

- Published articles on cybersecurity topics such as threat landscapes, attack vectors, and future technologies.
- Edited and refined technical reports to align with audience-specific needs and industry standards.
- Stayed current with evolving security trends and cutting-edge technologies.
- Developed expertise in technical writing and knowledge dissemination for both professional and general audiences.
- Author Page: <https://www.secjuice.com/author/k4b00m/>

PROJECTS

1Layer Digit Recognition from Scratch using only pandas

Personal Project, Spring 2023

Developed a single-layer neural network for digit recognition using only Pandas by manually implementing forward propagation, backpropagation, and weight updates. Accuracy: 83%. This project deepened my understanding of neural network fundamentals and improved my skills in numerical computations and data preprocessing. The project: <https://www.kaggle.com/code/hozaifa/guidednn-1layer-learning>. I later made one with Pytorch Accuracy: 94% : <https://www.kaggle.com/code/hozaifa/nn-image-learning-usingpytorch>

Data Analytics Project on Netflix Data with zero-shot Genre

Classification

Personal Project, Spring 2025

Performed exploratory data analysis and built a machine learning model on Netflix's movie dataset, focusing on films from the 1990s. The project involved data cleaning, feature engineering, and visualization to analyze trends like movie durations, genre distributions, and top directors/actors. I also implemented a zero-shot classification model using Hugging Face's BART model to predict movie genres based on descriptions.

Project: <https://www.datacamp.com/datalab/w/7c23258d-07ce-44db-9629-606d7eb99c81/>

Full Stack Universal Ecommerce Project

Personal Project, Jan 2025 - Present

Currently developing a React Native-based full-stack ecommerce application to further enhance my web development skills. I have completed most of the backend work (basic API calls and data modeling using the Drizzle ORM library) and implemented secure JWT-based authentication with password hashing via bcryptjs. I'm now focusing on the frontend of the application.

Analyzing Car Reviews with LLMs And Creating Analytics Chatbot

Personal Project, Feb 2025 - Present

- This project processes car reviews from a CSV file and applies several NLP techniques in a streamlined workflow. First, the dataset is cleaned and preprocessed, with review labels converted to a binary format. A sentiment analysis model (based on distilBERT) evaluates the reviews, and performance is measured using accuracy and F1 score.
- The key sentences from a review are extracted and translated into Spanish using a Helsinki-NLP model, with translation quality assessed via BLEU scores. A question-answering model is then applied to extract specific details from the review, and a summarization model (BART) condenses lengthy reviews into concise summaries
- Project: <https://www.datacamp.com/datalab/w/69d93e2d-9bbb-4544-b117-4aef94532895/edit>

Certificates/Awards

AWS Getting Started with CloudOps, IBM Python for Data Science, IBM zOS TCP/IP Config, Data Camp Certified Data Analyst. Multiple Honors & Dean's list for both institutions attended. UNC Hackathon Participant.

GitHub (Other Projects): <https://github.com/hozaifaO>

LinkedIn: <https://www.linkedin.com/in/hozaifa-o-a0b580266/>

DataCamp (Courses & Projects) : <https://www.datacamp.com/portfolio/hozaifa>