



Hunzala Mushtaq

Date of birth: 17/02/2004 | **Nationality:** Pakistani | **Email:** hanzla1702@gmail.com | **Website:** <https://github.com/HUNZALAMUSHTAQ> | **LinkedIn:** <https://www.linkedin.com/in/hunzala-mushtaq/>

ABOUT MYSELF

Full-stack software engineer with 2+ years of experience who is consistent and dedicated to learning and has software engineering professional experience in Healthcare and Generative AI.

EDUCATION AND TRAINING

01/09/2020 – 01/09/2024 Karachi, Pakistan

COMPUTER SYSTEMS ENGINEERING NED University of Engineering and Technology

The relevant courses are:

- Artificial Intelligence (A-)
- Distributed Computing (A)
- Parallel Programming (A)

Please note that the transcript along with the grading scale is attached in the link.

Website <https://www.neduet.edu.pk/> | **Field of study** Engineering | **Final grade** 3.418

Link <https://drive.google.com/file/d/1-xjZCkIwiti0Bh-lAbLLPUvblptFlywA/view?usp=sharing>

WORK EXPERIENCE

FOLIO3 – KARACHI, PAKISTAN

Website <https://folio3.com/>

SOFTWARE ENGINEER – 04/08/2024 – CURRENT

- Leading digital health projects and utilizing the latest technology for AI-infused, HIPAA-compliant software.
- Building backend infrastructure using the latest technologies such as .NET, Node.js with MongoDB, Elasticsearch, etc., on AWS, Azure, and on-prem deployments.
- Researching potential prospects and customers for AI integrations in their products, utilizing agentic AI frameworks like Langgraph and PyTorch.

FOLIO3 – KARACHI, PAKISTAN

Website <https://folio3.com/>

TRAINEE SOFTWARE ENGINEER – 04/09/2023 – 15/07/2024

- Worked on multiple projects in different departments, such as Digital Health and AppDev.
- Trained on various stacks such as React Native, the MERN stack, and .NET.
- Orchestrated end-to-end CI/CD pipelines on Azure DevOps for projects across the organization with on-prem deployments.

TEZERACT AI – KARACHI, PAKISTAN

Website <https://tezeract.ai/>

Link <https://drive.google.com/file/d/1gDpvNFnHT8udhOVnGY0Dh5nV2TDLee-e/view?usp=sharing>

SOFTWARE ENGINEER INTERNSHIP – 15/11/2022 – 15/01/2023

- Gained hands-on experience in front-end development, focusing on pixel-perfect design using JavaScript and frameworks such as React.js and Next.js.
- Applied fundamental software engineering principles to design backend architecture and deployment processes in multiple projects.

LANGUAGE SKILLS

Mother tongue(s): **URDU**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C2	B2	B2	B2	B2

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user

SKILLS

Tools and Technologies

C# (.NET, .NET Core, .NET Framework) | React JS | Next JS | DevOps | MySQL, MongoDB, MariaDB | Nest JS | Python | Javascript (NodeJs) | Angular | Langgraph, Langchain | Git | Node JS | Azure AWS

Industry Knowledge

Machine Learning | Application Development | Generative AI | Embedded Systems | engineering principles | Standard HL7 FHIR

PROJECTS

11/01/2024 – CURRENT
Orthoview

- Orthoview is a real-time DICOM software solution innovatively designed for sports medicine, enabling rapid image sharing and collaboration crucial for athlete care.
- Architected and deployed a robust backend infrastructure utilizing C#, ASP.NET 8, FHIR HL7 standards, AWS, React, and JavaScript. This setup enhanced system response times and scalability.
- Engineered multi-modal DICOM viewer components enabling real-time rendering and manipulation of diverse medical imaging modalities, including MRI, CT, and X-ray, within a web-based PACS environment.
- Stepped in as the acting team lead for a group of 5 during a critical period, refining project workflows and bolstering my leadership, organizational, and time management skills.

Links <https://orthoview.folio3.site/> | <https://digitalhealth.folio3.com/sports-pacs-software/>

05/08/2023 – 05/08/2024

Deep learning-based Voice Cloning for Local Languages

A year-long deep learning-based final year project for the ATUP organization, developing a TTS algorithm for the local language (Urdu) to address a significant technological gap in underrepresented languages, utilizing my scientific and research approach. Crafted a data acquisition and preprocessing pipeline, including data collection over 80+ essays and 1000+ audio clips. Used spectral gating technique for noise reduction for model training. Implemented XTTS architecture integrating VQ-VAE encoding, a GPT-2-based linguistic encoder, and a HiFi-GAN vocoder while leveraging transfer learning and deep neural networks to enhance speech naturalness, achieving a Mean Opinion Score (MOS) of 3.14.

Link https://drive.google.com/file/d/1WBTbno702m_QktJKgWKgsXnjlEgAungl/view

BLLR Basketball Shot Classification

- Project with a research opportunity to identify the best-performing algorithm on the basketball shot classification with a motion sensor, which enhanced my ability to apply data analysis and machine learning concepts.
- Conducted an extensive literature review to identify best-performing algorithms such as SVM (Support Vector Machine), XGBoost, and LSTMs as the problem was similar to HAR (Human Activity Recognition).
- Implemented a data preprocessing pipeline with sliding-window segmentation for multi-dimensional data from motion sensors (IMU, accelerometer, etc.) and evaluated the best performing model.
- Implemented a deep learning model that integrated Conv1D layers with LSTM for real time classification coded in Python libraries such as tensorflow, sklearn. Achieved over 80% accuracy in pattern recognition with sequence modeling capabilities.

Link <https://github.com/HUNZALAMUSHTAQ/Basket-Ball-Shot-Classification>

VOLUNTEERING

TE Links (Official Discussion Forum, Telecommunications Dept. at NEDUET)
Technical Director

- Led a cross-functional technical team, ensuring collaboration and clear task delegation.
- Organized and managed technical events and meetings, resources, and speaker coordination.
- The team was committed to developing its skill sets and monitoring the latest technological developments.