# JUNAID YOUSAF

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### RESEARCH INTEREST

Natural Language Processing (NLP), Computer Vision, Multimodal Learning (text, images, and video), Deep Learning, Explainable AI, VLMS, LLMS, Transformers and Generative Models with applications in healthcare, medical imaging, and intelligent decision-support systems.

## **EDUCATION**

Master of Science in Computer Science (MS-CS) CGPA: 3.17/4.00

Jan 2023 – Jan 2025

Ghulam Ishaq Khan Institute of Engineering Sciences and Technology (GIKI), Pakistan giki.edu.pk Thesis: Enhancing Medical Visual Question Answering with Multimodal Fusion of Vision Transformers and Clinical Language Models

Relevant Coursework: Advanced Natural Language Processing, Machine Learning and Computer Vision, Data Mining, Statistical and Signal Image Processing, Advanced Analysis of Algorithms, Theory of Automata, Operating Systems, Special Topics for Computer Engineering

Bachelor of Software Engineering (BS SE)) CGPA: 3.32/4.00 (Grade A)

2017 - 2022

Islamia College University Peshawar, Pakistan icp.edu.pk

Relevant Coursework: Artificial Intelligence, Computer Graphics, Data Structures & Algorithms, Multivariate Calculus, Linear Algebra, Design & Analysis of Algorithms, OOP, Software Development, Advanced Programming in Java, Visual Programming

Final Year Project (Thesis): Hate Speech Detection (Text-based) Using Machine Learning and LSTM

#### **EXPERIENCE**

Lecturer

May 2025 – Present

Faculty of Business Management and Computing, Cecos University of IT and Emerging Sciences KPK, Pakistan cecos.edu.pk

Taught Analysis of Algorithm and IT subjects; guided students in their FYPs.

## Graduate Research Assistant (GRA)

Jan 2023 - Mar 2025

## Data Analytics and Intelligent Computing Research Lab, FCSE, GIKI, Pakistan

Conducting research in multimodal learning with a focus on NLP and computer vision, integrating text and medical images, analyzing results, optimizing deep learning models, and collaborating on projects involving vision transformers and generative models.

#### **Assist Courses**

Advance Natural Language Processing (NLP) / Object Oriented Programming / AI and Computing / Elements of Computer Science / Artificial Intelligence Lab / Object Oriented Programming Lab Graduate Assistantship

Visiting Lecturer Sep 2022 – Jan 2023

## Government Post Graduate College Mardan, KPK, Pakistan

Taught Analysis of Algorithm and Operating System course to undergrad students, guided students through practical programming labs and different projects.

## **Data Science Intern**

Feb 2024 - Mar 2024

## Prodigy Infotech, India

Worked on multiple machine learning and data analysis projects, including: data cleaning and exploratory data analysis (EDA) on real-world datasets (Titanic, Kaggle), building a decision tree classifier for customer purchase prediction (Bank Marketing dataset), sentiment analysis of social media data for opinion mining, and traffic accident analysis to identify and visualize patterns related to road conditions, weather, and time. Data Science Internship

## ACADEMIC RESEARCH & PUBLICATIONS

#### JOURNAL PUBLICATIONS

J1: Capturing Poetic Essence: Text Summarization and Visual Generation via Multimodal

2025

Published in ICCK Transactions on Intelligent Systematics https://www.icck.org/tis

J2: IoT-Enabled Food Freshness Detection Using Multi-Sensor Data Fusion and Mobile Sensing Interface

Published in *ICCK Transactions on Sensing, Communication, and Control*, Vol. 2, Issue 2, pp. 122–131. https://www.icck.org/article/abs/tscc.2025.401245

**J3:** Emotion Detection in Urdu Speech: A Deep Hybrid Learning Approach Accepted in *International Journal of Speech Technology(Q1)*.

Accepted, 2025

#### Conferences

# C1: Hate Speech Detection Using Machine Learning and N-gram Techniques

2023

Bachelor's Thesis, Islamia College University Peshawar Published in JATISI (Jurnal Teknik Informatika dan Sistem Informasi), Vol. 10, No. 1 (2023). https://jurnal.mdp.ac.id/index.php/jatisi/article/view/4711

C2: Comparative Analysis of Deep learning models for Fake News Classification Submitted FIT 2025 Conference

## NATIONAL & INTERNATIONAL CONFERENCES & WORKSHOPS ATTENDED

1st National Workshop on AI in Healthcare, Drug Discovery, and Allied Sciences (AI-h2D), Pakistan May 2024

2nd International Symposium on Exploring the Nexus of AI and Quantum Computing, GIKI, Pakistan April 2024

1st Young Scientist Workshop on Applied AI, GIKI, Pakistan

Idea Presented: Judgment Forecasting in Pakistani Courts: A Deep Learning Approach

16th South East Asian Technical University Consortium (SEATUC), UTM Malaysia Feb 2022

Theme: Empowering Communities Through Innovative Engineering, Sciences and Technology

International Conference, IM Research Group, Abdul Wali Khan University, Mardan, Pakistan Aug 2022

International Webinar, Dinamika English Society, Dinamika University, Surabaya, Indonesia

Dec 2022

Guest Speaker: Presented Pakistani Culture and Ethics

## PROFESSIONAL TRAINING & CERTIFICATIONS

Neural Networks and Deep Learning – DeepLearning.AI https://coursera.org/verify/3AXKB3NGMPHD Aug 2023

Deep Learning with PyTorch: Image Segmentation https://coursera.org/verify/FG2TDDYDN32W Jul 2023 Python for Data Science, AI, and Development https://coursera.org/verify/T5KEDUEJJF9W Oct 2023 NLP Foundation – iNeuron Aug 2023

### SUMMER SCHOOLS

Data Science Summer School

Aug 2023

Hertie School Data Science Lab, Germany

[14/08/2023 - 25/08/2023]

# DeepTech and Innovation Summer School

Apr 2024

European Union

[15/04/2024 - 19/04/2024]

### HONORS & AWARDS

## Winner – 3MT (Three Minute Thesis) Competition, ICETT 2024

2024

Recognized for excellence in research communication and presentation at the International Conference on Emerging Trends in Technology (ICETT). 3MT Award Certificate

## Graduate Assistantship Scholarship

2023 - 2025

Highly competitive, merit-based scholarship awarded to top MS students at GIKI, covering full tuition and stipend while providing opportunities for teaching and research assistance. Graduate Assistantship Admission Letter

## Frontier Education Merit Scholarship

2017 - 2021

Awarded for outstanding academic performance during Bachelor's studies in Software Engineering.

## INTERESTS & COMMUNITY INVOLVEMENT

**Badminton:** An enthusiastic badminton player; enjoy both playing recreationally and participating in competitive matches. **Swimming:** Active swimmer at the GIKI pool, focusing on fitness, endurance, and overall well-being.

Volunteer Work: Dedicated blood donor and coordinator at Fatimid Foundation Blood Bank, Peshawar (Aug 2018 – Dec 2018), contributing to community health initiatives.

#### REFERENCES

#### Ass Prof. Khurram Jadoon

Graduate Research Supervisor, Data Analytics and Intelligent Computing lab, Ghulam Ishaq khan Institute https://giki.edu.pk/personnel/dr-khurram-khan-jadoon/

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### Dr Fahad Bin Muslim

Graduate Research Supervisor

https://scholar.google.com/citations?user=RlCw5CgAAAAJhl=en

Email: fahad.muslim@giki.edu.pk