TILA MUHAMMAD

M: + (92) 331 4030386 **| E:** i257601@isb.nu.edu.pk **|** GitHub **|** LinkedIn **|** Portfolio

RESEARCH INTERESTS

Machine Learning, Natural Language Processing, Sentiment Analysis, Fake News Detection, Hate Speech Detection

EDUCATION

FAST – National University of Computer and Emerging Sciences, Islamabad

MS in Artificial Intelligence   Jan 2026 – Present

Islamia College Peshawar

BS in Software Engineering – **CGPA 3.52**   *Link*   Aug 2017 – Sep 2021

WORK EXPERIENCE

Clouditecture – *AI/ML Intern*   *Link*   Nov 2024 – Feb 2025
- Developed and implemented machine learning models for:
    - Sentiment analysis of textual data on yelp reviews and twitter data
    - Email spam classification using natural language processing techniques
    - Quora duplicate question detection using Sentence Transformer and KNN
    - Job description to ESCO occupation code classification

atomcamp – *Artificial Intelligence Trainee*   *Link*   Jun 2024 – Sep 2024
- Gained hands-on experience through diverse AI and ML projects, including:
    - News classification using the BBC dataset
    - Student adaptability prediction using behavioral data
    - Weather condition identification through image data
    - Summarization of Urdu discussion threads using LSTM and K-Mean Clustering
    - Obesity trend analysis and prediction

atomcamp – *Data Science Trainee*   *Link*   Jan 2024 – Apr 2024
- Collaborated with peers to gather, clean, and preprocess datasets for exploratory and statistical analysis.
- Utilized Excel for advanced data manipulation, visualization, and statistical computations.
- Wrote SQL queries to retrieve, manipulate, and analyze data from relational databases.
- Designed and developed interactive dashboards and reports using Power BI to communicate insights effectively.

Strings Technologies – *Odoo Developer Intern*   *Link*   Mar 2022 – Sep 2022
- Worked closely with the CEO to develop and customize Odoo ERP applications based on specific business requirements.
- Diagnosed and resolved technical issues within the Odoo framework, ensuring optimal system performance.
- Maintained comprehensive documentation for custom modules, bug fixes, and technical procedures.

PROJECTS & RESEARCH EXPERIENCE

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

ICCK Transactions on Sensing, Communication, and Control,   June 2025
- Co-authored with Mazhar Iqbal, Junaid Yousaf, and Atif Khan.
- Developed a low-cost IoT-based system using biosensors and a mobile interface to detect food freshness in real time.
- Achieved accurate classification of spoiled vs. consumable dairy, meat, and fruit products using pH, moisture, and ethanol sensors.
- Aimed at reducing foodborne illnesses and minimizing food waste through early spoilage detection.
- **DOI:** 10.62762/TSCC.2025.401245

Hate Speech Detection Using Machine Learning and N-Gram Techniques   March 2023
- Co-authored with Atif Khan and Junaid Yousaf, focused on detecting hate speech in social media content using supervised machine learning algorithms.
- **Tools & Libraries:** Python, NumPy, Pandas, NLTK, Scikit-learn, Matplotlib, Regex.
- **Outcomes and Findings:** Achieved 94.58% accuracy, demonstrating high performance in binary classification.
- **DOI:** 10.35957/jatisi.v10i1.4711

Exam Management System – *Dr. Bahar Ali*   2022
- Designed and implemented a complete Exam Management System using Odoo ERP platform.
- Automated key academic fucntions including exam scheduling, grading workflows, and report generation.
- **Tools & Technologies:** Odoo ERP, Python, PostgreSQL, CSS, HTML, XML.
- Improved operational efficiency by centralizing exam-related processes within an integrated system.

Fake News Detection Using Machine Learning and LSTM – *Dr. Atif Khan*   Oct 2020 – Aug 2021

- Built and compared models for fake news detection using both traditional ML (Logistic Regression + TF-IDF) and deep learning (LSTM + Word2Vec).
- **Tools & Libraries:** Python, Tensorflow, NumPy, Pandas, NLTK, Scikit-learn, Matplotlib.
- **Outcomes and Findings:** Accomplished 90.9% accuracy with Logistic Regression (TF-IDF Uni +Tri-grams) and 87.2% with LSTM using Word2Vec embeddings.

LEADERSHIP & SERVICE

IEEE Computer Society – FAST-NUCES student Chapter, Research Team Member   2025 – Present

- Selected to the Research Team; collaborate on chapter-led research initiatives and tooling.
- Contribute literature reviews, prototype code, and internal write-ups; coordinate with peers.

CERTIFICATIONS

1st International Seminar on Advanced Bioinformatics	*Link*	2025
IELTS | Listening: 7.0, Reading: 5.0, Writing: 6.0, Speaking: 6.0 | Overall: 6.0	*Link*	2025
How to Write and Publish a Scientific Paper, Coursera	*Link*	2023
Machine Learning, Simplilearn	*Link*	2023
KP Digital Internship Program	*Link*	2022
Zero to Mastery Machine Learning, Udemy		2020

HONORS & AWARDS

- **PM** Youth Laptop Scheme – Awarded for Academic Excellence under a Nationwide Merit-Based Initiative   2019

SKILLS

- **Languages:** Python (NumPy, Pandas, Scipy, Matplotlib, Scikit-learn, NLTK, Tensorflow), HTML, CSS, XML, Odoo ERP
- **Visualization:** Power BI
- **Miscellaneous:** Ubuntu, Windows, Latex (Overleaf), Microsoft Office, Visual Studio, Kaggle, Jupyter Notebook, GitHub, Anaconda

REFRENCES

Dr. Atif Khan
Chairman/Associate Professor
Islamia College Peshawar
Email: atifkhan@icp.edu.pk
Phone: +92-3339257326

Dr. Khalid Haseeb
Assistant Professor
Islamia College Peshawar
Email: khalid.haseeb@icp.edu.pk
Phone No: +92-9216948