Mohammed Junaid Anwar Qader

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Education

University of Toronto

Sept. 2025 - Dec. 2026 (expected)

Master of Science in Applied Computing (MScAC) Concentration: Artificial Intelligence

National Institute of Technology, Warangal

Bachelor of Technology, Computer Science and Engineering

CGPA: 9/10 2021 - 2025

Industry Experience

Wells Fargo May-July 2024

SDE Intern

Chennai, India

- Developed a secure chatbot extension for VS Code and IntelliJ IDEA, integrating NLP with Confluence API for real-time, developer query resolution and a Harness API extension to display logs and pipeline states within IDEs, reducing context switching and improving developer productivity by 40%.
- Leveraged JavaScript, VS Code API, Java AWT Swing, NLTK, and SpaCy while ensuring compliance with Wells Fargo's security protocols through collaboration with cross-functional teams.

Research Experience

Molecular Descriptors in Drug Design

Aug 2024 - Mar 2025

- Developed CathepsinDL, a deep learning framework using BindingDB and ChEMBL data to predict Cathepsins B, S, D, and K inhibitor potency by IC₅₀ ranges for early-stage drug screening.
- Applied feature elimination techniques to obtain an optimal descriptor set and trained 1D CNN models with SMOTE to address class imbalance, achieving 97% accuracy in identifying potent inhibitors.

Deep Learning and IoT-based Mosquito Wingbeat Event Detection

Jan-Apr 2024

- Preprocessed mosquito wingbeat audio into log-mel spectrograms with PCEN and augmentation for robustness in noisy
 conditions.
- Trained a custom CNN-TCN model with attention, and optimized it for real-time inference on edge IoT devices, achieving over 90% accuracy in mosquito wingbeat audio event detection.
- Seervi, A., Mulani, N., Anwar, M. J., & Venkanna, U. (2025). IoT-Enabled Intelligent Framework for Real-Time Mosquito Detection and Monitoring. SN Computer Science, 6(5), 484.

Projects

SLM-nanoGPT Sep 2025

Recreated a GPT-2-style model trained on the TinyStories dataset to explore transformer internals and LLM training.

• Implemented a small-scale LLM from scratch, gaining hands-on experience with tokenization, dataset preparation, and pretraining. Currently focused on learning more about advanced LLM architectures and techniques.

MLOps Weather Predictor

Sep 2025

End-to-end weather prediction pipeline for Toronto, forecasting weather codes using historical time-series data.

Implemented a full MLOps pipeline with automated retraining, deployment, and monitoring to maintain production-ready
performance. Engineered time-series features from historical weather data and trained an XGBoost model to predict
weather codes.

Caption Crafter July 2024

Generates catchy captions for Instagram posts

• Developed an end to end deep learning pipeline using DenseNet201 + LSTM for image captioning and integrated Groq Cloud API for dynamic hashtags.

Skills & Interests

Programming Languages/Frameworks: C++, Java, Python, JavaScript, Django, React, PyTorch

Skills: Git, AWS, Docker

Interests: LLMs, RAG, Agentic Systems, Computer Vision, Natural Language Processing

Competitive Programming: ICPC Asia West regionalists.

Coursework

Computational Imaging, Neural Networks and Deep Learning, Visual and Mobile Computing, AI for drug discovery