AMINE KIDANE

Abu Dhabi, United Arab Emirates

📞 (+971) 503437768 ✉ aminekidane4@gmail.com 🔗 linkedin.com/in/amine-kidane ⭘ github.com/amew0

EDUCATION

Khalifa University   **Aug. 2019 – Jan 2024**
*BSc. in Computer Engineering (Track on AI), GPA: **3.96**/4.0*   *Abu Dhabi, UAE*

- President's List: 8/9 Semesters
- Full Undergraduate International President's Scholarship (10% acceptance rate)

EXPERIENCE

Research Assistant, KU 6G Research Center   **Jun. 2024 – Present**
Khalifa University, PI: Prof. Azzam Mourad   *Abu Dhabi, UAE*

- Designed DRL- and RAG-enhanced frameworks for multimodal LLM-assisted on demand service deployment in 6G vehicular networks using conversational, visual, and sensory data under real-time constraints.
- Coordinated with cross-institutional teams on applied 6G network intelligence, LLM capabilities on microservice placement, and edge computing paradigms.
- Contributed to multiple submissions to top-tier IEEE venues including INFOCOM, TVT, VTM, CAIS, and WiMob.

AI Software Engineer Intern   **Jan. 2024 – May 2024**
Rhetora.ai   *Remote*

- Designed an AI co-pilot sales software solution integrating automation and scheduling to streamline decision-making processes across prospecting, lead nurturing, and deal closure.

Visiting Undergraduate Researcher   **May 2023 – Aug. 2023**
eBrain Lab, NYU Abu Dhabi, PI: Dr. Mohammed Shafique   *Abu Dhabi, UAE*

- Designed a quantized hardware-aware NAS framework for autonomous robots, achieving 15% faster inference and 1.2× higher energy efficiency on embedded GPUs.

Cybersecurity Intern   **Jun. 2022 – Sep. 2022**
EBTIC, PI: Dr. Rasool Asal   *Abu Dhabi, UAE*

- Investigated solutions for defending against adversarial attacks on machine learning models in cyber-physical systems, achieving enhanced robustness with a 5.7% reduction in successful attack rates.

PUBLICATIONS

1. D. Ayepah-Mensah, **A. K. Ghebreziabiher**, et al., "Large language Model-Based Trajectory Forecasting for Dependency-Aware Microservice Migration in 6G Vehicular Edge Networks," submitted to *IEEE Transactions on Wireless Communications*, October 2025.

2. D. Ayepah-Mensah, **A. K. Ghebreziabiher**, et al., "AI-Native Cloud-Edge Orchestration for 6G Metaverse Networks: An LLM-Guided Multi-Agent DRL Approach," submitted to *Complex & Intelligent Systems*, August 2025.

3. D. Ayepah-Mensah, **A. K. Ghebreziabiher**, et al., "A RAG-assisted DRL Framework for Microservices Deployment in 6G Vehicular Networks," in *Proc. IEEE WiMob*, Marrakech, Morocco, October 2025, to be published (in IEEE Explore).

4. **A. K. Ghebreziabiher** *et al.*, "On-Demand Vehicular Service Deployment in 6G: A Collaborative Large-Small LM Architecture," submitted to *IEEE Vehicular Technology Magazine*, July 2025.

5. G. O. Boateng, **A. K. Ghebreziabiher**, et al., "Move-LLM: Multimodal LLM-assisted DRL Framework for On-Demand Service Deployment in 6G Vehicular Networks," submitted to *IEEE Transactions on Vehicular Technology*, June 2025.

6. G. O. Boateng, **A. K. Ghebreziabiher**, et al., "Towards On-Demand Metaverse Service Deployment in 6G Vehicular Networks Using Multimodal LLMs," *IEEE INFOCOM 2025 - IEEE Conference on Computer Communications Workshops (INFOCOM WKSHPS)*, London, United Kingdom, 2025, pp. 1-6, doi: 10.1109/INFOCOMWKSHPS65812.2025.11152975.

Technical Skills

Languages: Python, Java, C/C#/C++, MATLAB, TypeScript, JavaScript, SQL, PHP
Frameworks: HuggingFace, OpenCV, Scikit, TensorFlow, PyTorch, Keras, QisKit, ReactJS, Django, Node
Cloud Solutions: HPC, AWS, Alibaba Cloud, RunPod, Vast.ai
Tools: Visual Studio/VS Code, Eclipse, IntelliJ IDEA, Git, MATLAB, R
Database Management: SQL, MySQL, PostgreSQL, MongoDB
Robotics: ROS (2), PX4, Navigation, Localization

Projects

Electrical Impedance Tomography Image Reconstruction | *Independent Study*   **Aug. 2023 – Jan. 2024**
- Explored variational autoencoders to tackle ill-posed inverse problem in EIT image reconstruction, targeting a 5% improvement in image quality compared to SOTA models.

Transformer-Aided Underwater Object Tracking | *Computer Vision*   **Oct. 2022 – Jan. 2023**
- Enhanced tracking precision by 2.5% with transformer-based techniques in light constrained environments.

Automatic Waste Segregation System | *Final Senior Design Project*   **Sep. 2022 – Sep. 2023**
- Led final Senior Design Project in developing a patented smart waste segregation system equipped with computer vision modules and mechanical actuators.

MBZIRC Maritime Grand Challenge | *Computer Vision*   **Oct. 2022 – Jan. 2023**
- Performed complex navigation tasks in a GNSS-denied area, with the computer vision team for a heterogeneous collaboration between 2 UAVs and 4 USVs.

Emirates Robotics Competition 2023 | *Computer Vision*   **Dec. 2022 – Mar. 2023**
- Trained and designed an autonomous manipulator arm for pick-and-place tasks.

Smart Family Banking System | *Full-Stack Development*   **Feb. 2023 – Apr. 2023**
- Created a web and mobile banking system with ChatGPT-3 integration on AWS.

Hackathons & Awards

EDGE Pioneers 4.0 Hackathon Series 3 | *EDGE Learning and Innovation*   **Oct. 2023**
- Developed an anomaly detector for high-speed printing systems using PaDiM to enhance production efficiency.

Alibaba Cloud GenAI Hackathon 2023 | *GITEX Global InnovateFest*   **Oct. 2023**
- Created ZenMate, a chatbot hosted on Alibaba Cloud using Facebook Llama 2.
- Recognized as a Sustainability Expert in GenAI for Social Good in MENA.

NYUAD Hackathon for Social Good | *NYU Abu Dhabi*   **Apr. 2023**
- Built a quantum crop rotation optimizer for UAE agriculture, promoting Quantum Computing in the Arab world.

17th IEEE Software Engineering Competition | *American University of Sharjah*   **May 2023**
- Awarded Second Prize among regional participants for an innovative software engineering project.

MathWorks MATLAB Hackathon for UN SDG 13 | *Khalifa University – MathWorks*   **Feb. 2023**
- Trained regression models to predict climate-related data with MSE loss below 25%.

Khalifa University Programming Contest | *Khalifa University*   **Nov. 2022 & Dec. 2022**
- Won First Prize twice for implementing time-constrained algorithms in a team-based programming competition.

Musabaqat Mathematics Competition V | *Khalifa University*   **Nov. 2023**
- Placed 5th among 90 students from 4 universities in a mathematics competition.

Open Mathematics Olympiad | *IUHD – Turkmenistan (Remote)*   **May 2022**
- Achieved Second Prize in an international mathematics competition.

Academic Honors | *Khalifa University*   **2019 – 2023**
- Full Undergraduate International President's Scholarship (2019).
- Golden Key International Honor Society Inductee (2020).
- President's List in 8 out of 9 semesters.

Extracurricular

AI Club Cofounder   **Aug. 2023 – Dec. 2023**
- Co-founded the AI Club at Khalifa University, attracting over 250 members and organizing hackathons to showcase and raise awareness about the capabilities of LLMs.

Techstars Innovation Bootcamp   **Feb. 2022 – Mar. 2022**
- Competed in the Techstars Innovation Bootcamp representing Khalifa University in the IP commercialization challenge.

Peer Tutoring   **Feb. 2019 – Jun. 2021**
- Peer-tutored 150 hours in C++ and Calculus for 3 semesters and received an appreciation certification.

Global Day Event Organizer   **Mar. 2023**
- Curated an engaging event highlighting Eritrea and its cultures and guided the presentation for maximum impact.