Karl Azangue

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EDUCATION

University of Texas at Dallas Anticipated Graduation: May 2026

B.S in Computer Science and minor in Physics *Richardson, TX*

Relevant Coursework: Software Engineering, Discrete Math, Computer Architecture, Data Structures and Algorithms, Programming in Unix, Quantum Computing

EXPERIENCE

UT Dallas Nebula Labs — Feb 2024 – current

Software Develeoper — *Richardson, TX*

- Maintain and contribute to UT Dallas's largest university dataset, develop public APIs for Nebula products, and implement solutions to support the Nebula Labs ecosystem.
- Developed the API using GO, and Node.js with Express.js, and Python with Flask.
- Utilized MongoDB for data storage and retrieval.

UT Dallas AISC — Feb 2024 – current

ML/AI Software Developer — *Richardson, TX*

- ML/AI Software Developer for the UT Dallas AISC VISTA Venture.
- Make us of GANs to build a generative AI model capable of interpreting text/speech prompts and creating an immersive/interactive VR landscape.

NASA — Jan 2024 – current

NASA L'Space MCA Program Participant — *Remote*

- Collaborating with a team of 15 students to build a low-cost robotic reconnaissance mission concept that will test a specific areas on the Martians surface for water feed stock of more than 100 metric tons of water.
- Responsible for keeping track of the budget across the Engineering and Science teams to properly allocate the allocated funds and ensure compliance with the $300 million constraints.
- Build a GNC architecture that enables the rover to autonomously traverse the Martian terrain with limited input.
- Used JMARS to identify Martian surfaces with little regolith to enable the spectrometer to penetrate the ground.
- Built a thermal subsystem that ensures the rover maintains a net load of 0 Kelvin at all times.

Independent Researcher — Jan 2024 – current

QML Undegraduate Researcher — *Richardson, TX*

- Conducted a Researcher under the guidance of Dr Doug Degroot to improve the accuracy and speed with which Quantum Machine Learning Algorithms go through input data.
- Built, trained, and tested Quantum Machine Learning models using Pennylane's framework.
- Used Qiskit to build and test quantum computing algorithms and circuits.

UTD Office Of Information and Technology — February 2023 – Current

Computer Lab Technician — *Richardson, TX*

- Recognized and promoted to Computer Lab Technicians after 6 months of the job.
- Made use of power automate to automate UTD's loaners program and increased efficiency by over 3x.
- Configured mobile devices, including Apple, Android, and other platforms, to ensure optimal functionality.
- Managed over 200 devices for the student computer loaner equipment program, supporting remote learning.

SKILLS

Programming Languages: Java, Python, C/C++, GO, Assembly
Machine Learning & Quantum Computing: IBM Qickit, JupyterNotebook, numPy, Pandas, Matlab
Tools & Technologie: AutoCAD, React, Xcode, Visual Studio, Visual Studio Code, Node.js, Mars/Mips
Hobbies: I love Listening to Japanese Rock and playing Armored Core