

RENNY HOANG

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EDUCATION

University of Texas at Dallas May 2026
Master of Science, Computer Science (Fast Track) Richardson, TX

University of Texas at Dallas May 2026
Bachelor of Science, Computer Science with Minor in Music Richardson, TX

- Cumulative GPA: 4.0
- Honors: Computing Scholar, National Merit Scholar, Collegium V Honors, Dean's List (x4)
- Relevant Coursework: DSA, Theory of Computation, Programming Languages, Software Engineering, UNIX

PROFESSIONAL EXPERIENCE

Undergraduate Research Assistant May 2024 - Present
University of Texas at Dallas Richardson, TX

- Modeled atmospheric bias in InSAR datasets with statistical models in **MATLAB**, increasing accuracy of interferograms
- Developed interactive visualizations for InSAR time-series analysis using **Python (Flask and Matplotlib)**, improving accessibility and understanding for researchers
- Optimized processing efficiency by using parallel-computing, reducing analysis time by 40%

Undergraduate Teaching Assistant Jan 2024 - May 2024
University of Texas at Dallas, Department of Computer Science Richardson, TX

- Improved understanding of programming in students by conducting review sessions and providing feedback
- Assisted in course development by creating supplementary learning materials and grading assignments

Undergraduate Research Assistant May 2022 - Aug 2022
University of Texas at Dallas Richardson, TX

- Achieved an increase in workflow efficiency with respect to processing time by implementing automated pre-processing scripts in **Python**
- Reduced error rate of FOAM models by implementing noise reduction in **MATLAB**, resulting in more accurate wind turbine simulations

PERSONAL PROJECTS

YAPS (Yet Another Plugin Suite) | C++, JUCE May 2024

- Collection of open-source audio plugins that includes an FM synthesizer, equalizer, delay, reverb, and compressor
- Implemented advanced DSP algorithms for accurate and efficient audio effects and synthesis
- Conducted profiling and benchmarking to identify and address performance bottlenecks

Student Org Hub | MongoDB, Express, React, Node.js Dec 2023

- Developed a web app using the MERN stack (**MongoDB, Express.js, React.js, Node.js**) to enable UTD students to manage and interact with student organizations
- Designed and implemented a user-friendly interface with React.js, providing intuitive navigation and responsive design for a seamless user experience

quali.today | Next.js, Typescript, PostgreSQL, Tailwind CSS Oct 2023

- Implemented statistical models/analysis in **Python** (using **numpy** and **matplotlib**) to approve housing loans based on aggregated data including income, credit score, and past loan payments
- Crafted a UI for users to interact with the statistical models, check if they are eligible, and provide tips for the user to become eligible if they are not
- Architected a backend that includes a **PostgreSQL** database for securely storing user information and uses the **Prisma ORM** for interacting with the database

TECHNICAL SKILLS

Programming Languages: Python, Java, C/C++, SQL, Javascript/Typescript, HTML/CSS (Tailwind), Prolog, Lisp

Frameworks: Next.js, ReactJS, Node.js, Material-UI, Flask, JUCE, MATLAB

Developer Tools: Anaconda, Git, Docker, AWS, Kubernetes, Figma, (Neo)Vim, Visual Studio, PyCharm

Certifications: AWS Certified Cloud Practitioner (2024)