

# Quan Le

quan.le@rice.edu   ◇   github.com/quannle   ◇   972-800-8390

---

**EDUCATION**   **Rice University**, Houston, TX   May 2023  
B.A. in Computer Science, Computational and Applied Mathematics, Mathematics

- GPA: 3.931 / 4.00
- Relevant coursework: Statistical Machine Learning, Smooth Optimization, Numerical Linear Algebra, Probability Theory, Integration Theory

**University of North Texas**, Denton, TX   May 2019  
High School Diploma with Honors

- The Texas Academy of Mathematics and Science is a two-year residential early entrance college program under the Honors College at UNT.

**RESEARCH INTERESTS**   I'm broadly interested in data-driven decision making, the development of models and agents that drive or make those decisions in an interpretable and fair manner, and methods for estimation and learning via optimization.

*Areas of interest:* statistical machine learning, interpretability and explainability in machine learning, machine learning fairness, graphical models, reinforcement learning, optimization

**RESEARCH EXPERIENCE**   **Rice University**, Houston, TX   Jan 2021 –  
*Department of Electrical and Computer Engineering*  
Advisor: Genevera Allen

- Investigating model agnostic measures for fair machine learning.
- Analyzed variable selection consistency conditions and theoretical error bounds of a novel estimation method for exponential family graphical models and generalized linear models in a latent variable setting.
- Implemented efficient optimization methods to fit high dimensional probabilistic graphical models and determine community structure in neural visual cortices.
- Built scalable data exploration tools using Python to provide statistical analyses of neuron activity time series.
- Regularly performed literature reviews to inform and update research context.

*Department of Computational and Applied Mathematics*   Jan 2020 – Jan 2021  
Advisor: Jesse Chan

- Developed a method of rational spatial representations for the generation of geometric mappings.
- Created models of physical systems using numerical techniques for partial and ordinary differential equations.
- Researched stable methods for the nonlinear shallow water partial differential equations.

**University of North Texas**, Denton, TX   Aug 2017 – May 2019  
*Department of Materials Science and Engineering*  
Advisor: Wonbong Choi

- Conducted research on energy storing materials and created functional flexible supercapacitors using waste hemp carbon, in order to present a viable sustainable energy storage device.
- Provided structural analyses of carbon nanomaterials using atomic force microscopy and Raman spectroscopy, and electrochemical analyses of nanomaterial performance as supercapacitor material.

**HONORS AND AWARDS**   Rice Engineering Alumni Junior Merit Award   2022

- Awarded to one junior in the Computational and Applied Math department.

Rice Datathon awards for Best Overall Project and Best Social Impact   2022

- Awarded to team project on stochastic redistricting of the Houston Congressional Districts to address fair representation.

President's Honor Roll   2021, 2022

	<ul style="list-style-type: none"> <li>• “The President’s Honor Roll, published each semester, recognizes outstanding undergraduate students in degree-granting programs.”</li> </ul>	
	Google Computer Science Research Mentorship Program Recipient	2021
	<ul style="list-style-type: none"> <li>• Selective program for research mentorship with Google computer scientists.</li> </ul>	
	Leo M. Acker Memorial Scholarship	2020, 2021
	<ul style="list-style-type: none"> <li>• Scholarship awarded to Rice undergraduate students.</li> </ul>	
	UNT Undergraduate Research Fellowship	2018
	<ul style="list-style-type: none"> <li>• “Reward[s] students who enter—and show promise of significantly contributing to—faculty-led research environments.”</li> </ul>	
SERVICE	Academic Fellow, Will Rice College, Rice University	2020
	<ul style="list-style-type: none"> <li>• Organized study groups, held review sessions, and provided one-on-one peer tutoring.</li> </ul>	
TEACHING	<b>Rice Learning Assistant</b>	Fall 2020 – Spring 2023
	CAAM 210: Introduction to Engineering Computation — Dr. Anastasia Protasov	
	<ul style="list-style-type: none"> <li>• Developed lecture material for weekly discussions, led discussion sections of 15-20 students, graded projects and held office hours.</li> <li>• Managed an algorithmic system of code checks to find outliers in code similarity from historic and current project submissions.</li> </ul>	
	<b>Course Assistant</b>	Fall 2022
	ELEC 478: Introduction to Machine Learning — Dr. Genevera Allen	
	<ul style="list-style-type: none"> <li>• Prepared 23 labs, each presenting practical details and implementations of machine learning models.</li> <li>• Assisted with homework grading.</li> </ul>	
	<b>Teaching Assistant</b>	
	COMP 382: Reasoning About Algorithms — Dr. Michael Burke	Fall 2021
	COMP 182: Algorithmic Thinking — Dr. Luay Nakleh	Spring 2021
	<ul style="list-style-type: none"> <li>• Graded homeworks and exams, proctored labs, administered exams, held office hours.</li> </ul>	
	<b>Technology Teaching Assistant</b>	Fall 2020 – Spring 2021
	<ul style="list-style-type: none"> <li>• Assisted faculty by providing on-call support to professors of four courses over two semesters: CEVE 325, ANTH 394, ESCI 101, CHIN 402.</li> <li>• Monitored and troubleshooted video and audio channels for streaming and recording of lectures.</li> </ul>	
INDUSTRY EXPERIENCE	<b>Software Development Engineer Intern</b>	May 2022 – Aug 2022
	<i>Amazon Web Services</i>	
	<ul style="list-style-type: none"> <li>• Increased operational speed by 100% for high severity, high frequency issues directly impacting customers using a tier-0 AWS foundational service by advancing tooling and automating common workflows.</li> <li>• Deployed code worldwide to over 20 AWS regions to support the Key Management Service (KMS), a large scale distributed cryptography provider.</li> <li>• Prepared and presented a project proposal and design document to the KMS engineering team.</li> </ul>	
SKILLS AND INTERESTS	<b>Languages:</b> Python, R, MATLAB, C/C++, Java, Julia	
	<b>Libraries:</b> numpy/scipy, pandas, matplotlib, scikitlearn, TensorFlow, Keras	
	<b>Interests:</b> photography, problem solving, science fiction	