

EDUCATION	<b>University of Texas at Austin</b>	Austin, Texas
	<i>B.S. in Mathematics</i>   GPA: 3.71	August 2020 - December 2023
	<ul style="list-style-type: none"> <li><i>Theoretical Coursework:</i> Graduate Algebra and Topology, Differential/Riemannian Geometry, Low-dimensional Topology, Measure Theory, Complex Analysis</li> <li><i>Applied Coursework:</i> Statistics, Neural Networks, Regression, QIS, Algorithms</li> <li><i>Activities:</i> Conducted research in geometric group theory, served as a Calculus TA</li> </ul>	
	<b>Texas Academy of Mathematics and Science</b>	Denton, Texas
	<i>High School</i>   <i>University of North Texas</i>   GPA: 3.82	August 2018 - May 2020
	<ul style="list-style-type: none"> <li><i>Coursework:</i> C++, Linear/Abstract Algebra, Real Analysis, Topology</li> </ul>	
EXPERIENCE	<b>North Cut Trading</b> (established by <b>Quantlab</b> co-founder)	Houston, Texas
	<i>Quantitative Researcher</i>   6 <sup>th</sup> hire	January 2024 - October 2024
	<ul style="list-style-type: none"> <li>Led the quantitative research team, developed automated strategies using statistical factor models alongside machine learning approaches that achieved &gt;2 Sharpe Ratio</li> <li>Built research infrastructure that accelerated backtesting by 5x through parallel batch processing, automated experiment tracking, and optimized resource allocation</li> <li>Architected and implemented machine learning pipelines using PyTorch, pandas, and scikit-learn for feature engineering, model training, and statistical validation</li> <li>Performed risk decomposition and mean-variance optimization to construct portfolios of orthogonal alphas, using statistical and fundamental factor models</li> </ul>	
	<b>USAA</b>	Plano, Texas
	<i>Software Engineering Intern</i>	May 2023 - August 2023
	<ul style="list-style-type: none"> <li>Deployed automated testing pipelines using Java SpringBoot and GitLab CI/CD</li> <li>Developed RESTful APIs and integrated them with frontend React components</li> <li>Built data access layer using MSSQL stored procedures, implemented queries</li> </ul>	
	<b>Directed Reading Program</b>	Austin, Texas
	<i>Mentee</i>	January 2021 - August 2023
	<ul style="list-style-type: none"> <li>Gave presentations on Langevin Monte Carlo sampling, topological quantum field theory, category theory, and de Rham cohomology through guided reading courses</li> </ul>	
PROJECTS	<b>Caught Stealing</b>   <i>R, Tidyverse, caret, keras</i>	
	Applied machine learning to predict when a runner would successfully steal second base	
	<ul style="list-style-type: none"> <li>Tested several classifiers including random forests, logistic regression, and AdaBoost</li> <li>Analyzed hundreds of real baseball games, achieved an accuracy of 71%</li> </ul>	
	<b>LaTeX Math Notes</b>   <i>Vim, Bash, Git</i>	
	Notes taken live in various mathematics courses, published through GitHub	
	<ul style="list-style-type: none"> <li>Optimized workflow to take live TeX notes in class using nvim, zathura, and snippets</li> </ul>	
SKILLS	<b>Languages:</b> Python, Unix Scripting, HTML, CSS, R	
	<b>Tools:</b> Pandas, NumPy, scikit-learn, PyTorch, Polars, SQL, Git, Tidyverse	
	<i>Hobbies:</i> Triathlon, Mandarin/Japanese, Chess, Table Tennis	