Kaden Nguyen

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EXPERIENCE

Tanius Technology

Quantitative Research Intern — ***Summer 2023**, Alamo, CA*

- Developed tools and graphs for analysis and trading teams. Back-tested strategies on S&P futures using VectorBT Pro and TA-Lib.
- Simulated technical strategies on the live high-frequency trading server, utilizing multiprocessing, numba, SnakeViz, etc. for runtime optimization
- Traded futures with an account over $400,000 worth in contracts

Jane Street First-Year Trading and Technology Program (FTTP)

Participant — ***Spring 2024**, New York City, NY*

- Selected to attend Jane Street First-Year program to learn about Jane Streets trading and technology models through classes and team-based mock trading simulation games

The Movement Lab - Stanford University

Deep Learning Researcher

Advisor: Professor Karen Liu — ***Summer 2024**, Stanford, CA*

- Researched deep learning on point cloud data as part of ARCap, a new augmented reality system in Visuomotor Policy Learning
- Built deep learning/transformer architectures, conducting imitation learning translated to robotic dexterous hand manipulation
- Paper on ARCap will be submitted to top peer-reviewed journals at the end of the summer

Stanford University Mathematics Camp (SUMaC)

Teaching Assistant/Residential Counselor — ***Summer 2024**, Stanford, CA*

- Worked full-time as an academic and residential counselor for the Group Theory/Abstract Algebra program, graded problem sets and held daily meetings with students
- Led the Cryptography and Number Theory project group

PROJECTS

ColorView Modification for CAMO Detection

[paper] [code] — ***Spring 2024**, Stanford, CA*

- Developed new Deep Learning architecture for performing camouflage detection in images
- Explored novel idea of encoding information from various view transformations of an image (mirror, resizing, etc.) and extended to color transformations

Lean Theorem Classifier

[paper] [code] — ***Winter 2024**, Stanford, CA*

- Innovated a Lean theorem classifier, using a combination of complex machine learning architectures and applications of research on large language models
- Utilized primarily convolutional neural networks to sort proofs into one of 28 math subcategories (geometry, algebra, y etc.), ultimately achieving over 91% accuracy

EDUCATION

Stanford University

*B.S. in Mathematics and Computer Science (**Expected Grad Date: June/2026**)*

Graduate Coursework:

- Machine Learning
- Computer Vision w/ Deep Learning
- Algorithms
- Probability Theory
- Computer Organization/Systems
- Modern Mathematics: Continuous Methods (Real Analysis, Linear Algebra, Multivariable Calculus)
- Differential Equations

Fall Coursework:

- Stochastic Processes
- Parallel Computing
- Automata and Complexity Theory

AWARDS

2x USA Math Olympiad (USAMO) qualifier

scored in top 50 students nationally — ***2021, 2022**,*

Other

USACO Gold Qualifier, MathCON National Champion, 2nd place MathLeague National Championship

SKILLS

Back End	Python, Java, C/C++
Front End	HTML, CSS, JavaScript
OS	Linux, Windows, macOS
DevOps	Git, GitLab

Libraries:

- Pytorch, TensorFlow, scikit-learn
- VectorBT-Pro, TA-Lib
- NumPy, pandas, numba, matplotlib

Interests

- Stanford Math Tournament Problem Writing
- Stanford Competitive Club Golf
- Stanford Poker