LUCAS DIONISOPOULOS

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EDUCATION

University of California, San Diego, San Diego, CA **September 2024 – June 2026**
M.S. in Computer Science and Engineering: Thesis (AI / Machine Learning)
- ***GPA***: 4.0 / 4.0. Teaching Assistant (*3 quarters*)
- ***Research***: Working with Prof. Raj Ammanabrolu on training language models to play chess through instilling search via supervised finetuning and reinforcement learning

Self-Directed Study **February 2023 – September 2024**
- ***Textbooks***: Mathematics for Machine Learning (*Diesenroth*), Introduction to Linear Algebra (*Strang*), Discrete Mathematics (*Rosen*), Introduction to Algorithms (*CLRS*), Operating Systems: Three Easy Pieces (*Arpaci-Dusseau*), Reinforcement Learning (*Sutton & Barto*)
- ***MOOCs***: MIT Introduction to ML (*6.036*), UW Programming Languages A & B (*Coursera*)

University of Wisconsin-Madison, Madison, Wisconsin **January 2024 – May 2024**
- *Part-time.* ***Courses***: Matrix Methods in Machine Learning (*Grade: A*), Non-Linear Optimization (*Audit*)

Washington University in St. Louis, St. Louis, MO **August 2017 - May 2021**
B.S.B.A. Major in Finance, Minor in Computer Science
- ***GPA***: 4.0 / 4.0 (*Valedictorian, Summa Cum Laude*). Teaching Assistant (*6 semesters*)

SELECT EXPERIENCE & PROJECTS

Select Research & Projects **June 2023 –**
- **Neurosymbolic Programming for ARC-AGI** *(Link)*: Attempted a novel neurosymbolic strategy for the ARC challenge using techniques from program synthesis. Personally developed a synthetic data generation pipeline, implemented and trained a custom vision transformer using PyTorch, generated and analyzed semantically meaningful image embeddings from the model, and optimized the custom model to run on various GPUs
- **Recreating Word2Vec** *(Link)*: Successfully recreated token algebra results from the Word2Vec paper from scratch. Notable custom implementations include a Wikipedia text cleaning pipeline, tokenizer, model architecture from the paper (*CBOW*), and visualization using various dimensional analysis techniques
- **Reinforcement Learning Driver** *(Link)*: Built and optimized a driving game in Python from scratch and trained a reinforcement learning agent using Double Q-learning in PyTorch to navigate unseen tracks

Contracting **September 2024 – November 2024**
- **Machine Learning Anomaly Detection** *(Link)*: Developed an anomaly detection system for a San Diego HealthTech company. Notable elements include the creation of custom evaluation sets, data cleaning techniques for noisy real-time data, implementation of kernel regression, and creation of interpretable anomaly flags

Financial Technology Partners, San Francisco, CA **June 2020 – June 2023**
Investment Banking Analyst
- Core developer of operating models, financial projections, valuation & returns analyses, diligence presentations, and large-scale data analyses on client datasets
- Managed teams of analysts on large projects and worked directly with client executives as a key contact
- Developed internal tooling to improve analyst efficiency and led training sessions for incoming analyst classes
- ***Select transaction experience***: Velocity Global $400mm Series B, Circle Internet Financial $25mm Financing

Clean Our Green *(Article)* **February 2021 – May 2021**
- Founded an initiative to improve local St. Louis parks and green spaces, conducting 21 park clean-ups by engaging 12 unique organizations and 100+ volunteers across the Greater St. Louis Area

AWARDS

John W. Bowyer Award in Finance **May 2021**
- Awarded to the graduate considered to have the greatest potential for success in a finance career, voted by faculty

Delta Sigma Pi Scholarship Key **May 2021**
- Awarded to the graduate with the highest academic average

Poets&Quants 2021 Best & Brightest *(Article)* **April 2021**
- Awarded to two graduating seniors from each of the top 50 undergraduate business programs, nominated by faculty for strong academic, extracurricular and professional achievements

Nebraska Class-A State Tennis Runner-Up (6x) **2015, 2016, 2017**

Eagle Scout **May 2016**

SKILLS

Skills: Python, PyTorch, data analysis, Excel & PowerPoint, public speaking, financial modeling & valuation
Interests: Rock climbing (*bouldering, sport & traditional*), through-hiking, beekeeping, philosophy