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OLIVER PROUDFOOT

Data scientist and Artificial Intelligence Ph.D. student specializing in Reinforcement Learning and Large Language Models, open to internship opportunities.

EDUCATION

The Ohio State University  | **Ph.D. in Artificial Intelligence** | 8/2025 - 5/2030 (planned)

University Fellow; Advisor: Andrew Perrault

- Research focusing on the intersection of Reinforcement Learning (RL) and Large Language Models (LLMs).

Brigham Young University  | **BS. Applied & Computational Math** with ML Concentration | 4/22/2022

Cumulative GPA: 3.95; Cum Laude & Full-Tuition Scholarship

- Elected to take and then TAed for *graduate-level* classes in machine learning and mathematical theory

WORK

3 Yrs @ Pluralsight  | B2B Ed-Tech | **Data Scientist, Product Features** | 6/1/2022 - 6/24/2025

- Led the development of a video corpus intelligence system, paving the way to multi-million dollar contracts by leveraging LLMs from Anthropic and OpenAI
- Augmented search using hypothetical document embeddings, improving clickthrough by ~2%
- Pitched to the executive leadership team on 5 occasions and ran multiple GenAI trainings for up to 70 employees
- Automated content creation with fully-featured hands-on labs and assessments since GPT-3
- Designed a graph-based algorithm for signal extraction on user behavior to model entity relationships
- Nominated by teammates to represent Pluralsight in the 2023 Vista Equity Partners' GenAI hackathon, winning \$20,000 with advanced context engineering to create an agentic curriculum curator: now GA in the app
- Systematically evaluated OpenAI's GPT and Anthropic's Claude models against internal evals to measure domain-specific performance and task-specific feasibility
- Created 2 user-facing recommendation algorithms from ideation to production
- Finetuned LLMs for content creation and content evaluation.

2 Yrs @ Sandia National Labs  | Gov't R&D | **Intern, ML for Correlated Intelligence** | 4/2020 - 12/2021

- Researched the computer vision applications and mathematical theory of the Fourier histogram of oriented gradients (FHOG) in polar coordinates for rotation invariant target detection and localization
- Improved from state of the art detection results by ~3%
- Optimized the FHOG algorithm to reduce spatial complexity by up to 99% and temporal complexity by up to 67%

1 Yr @ BYU Math & MAGICC Lab | **Teaching & Research Assistant** | 9/2019 - 4/2021 & 12/2021 - 4/2022

- Investigated sharp convexity in data-space vs parameter-space and its impact on neural network robustness
- Developed course material and assessed performance for 38 graduate math students
- Trained a CNN on simulated boat data to predict 6DoF rotation and translation from UAV video feed

SKILLS

Python

NumPy / Pandas
PyTorch / Deep RL
SQL / SQLAlchemy
Scikit Learn
Data Vis / Streamlit

LLMs

OpenAI / Anthropic / Gemini
Agentic Coding
Context/Prompt Eng
SFT & RL Fine-Tuning
AWS / Airflow / Gitlab CICD

Mathematical Analysis

NLP / Computer Vision
Numerical Linear Algebra
Optimization Theory
Probability Theory
LaTeX

Fast-Paced

Presenting
Technical Communication
Organizational Leadership
Learning
Multilingual

VOLUNTEER

SVU Faculty Conference (2x 90 Min Keynotes) | 8/2024

- Trained all SVU faculty and staff members on the education/LLM paradigm shift
- Conducted an interactive workshop and provided one-on-one consulting for educators

BYU Applied Math Colloquium (60 Min Talk) | 4/2024

- Spoke to the applied math department about data science, and the role of math & LLMs in the corporate world.

Full-Time Volunteer Church Representative (Spanish) | 8/2017 - 8/2019

- Directed training, team building, and administrative support for 20+ volunteers at a time
- Organized and led 5 English language learning programs for Hispanic immigrants

Food & Care Coalition Cook/Server | 9/2020 - 4/2021

- Worked predawn to help prepare food and serve the homeless

President of Church's Men's Organization | 2019 - 2022

- Led 70+ students in both church and community service capacities
- Administered organization business professionally and coordinated efforts with the women's organization and congregation leaders

LANGUAGES

Spanish: Reading/Writing/Speaking - Fluent

French: Reading/Writing/Speaking - Rusty

HOBBIES

Racquetball
Hiking

Rock Climbing
Camping

Canyoneering
Travel

Open Source
Teaching

Cooking
Service