



Gersi Doko

Pronounced Ger-si Dough-co

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Location: Dover, New Hampshire



Education

University of New Hampshire

Doctor of Philosophy - Computer Science

2022 - Expected May 2026

Durham, New Hampshire

- **Relevant Coursework:** Advanced Algorithms in Machine Learning, Deep-Q Learning, Reinforcement Learning, Risk Sensitive Decision-Making, LLM-Driven Optimization, Foundation Model Theory, Pytorch, TensorFlow, Prototyping, Implementation, Robotics

University of New Hampshire

*Bachelor of Science in Computer Science **Summa Cum Laude** (GPA: 3.98 / 4.00)*

2018 - Completed May 2022

Durham, New Hampshire

- **Relevant Coursework:** Data Structures and Algorithms (C++), Prob & Stat in CS (Python), Intro to CS II (C++), Linear Algebra w/Computational Applications (Python), Reinforcement Learning (Python), Neural Networks (Python), AWS, Azure, REST, Software Development, Cloud Infrastructure

Experience

UNH RL² Lab

Research Assistant

May 2022 – Present

Durham, NH

- Studying machine learning under Dr. Marek Petrik Ph.D. in the RL² Lab
- Researching and publishing robust solutions to risk-averse decision-making problems, with a focus on RL and LLMs
- Efficiently implementing and testing RL algorithms in Julia and Python
- Job Skills: Python, Julia, TensorFlow, PyTorch, Git, LLMs, Risk Sensitive Decision Making, Agentic AI, LangChain

Northlight AI

Machine Learning Engineer

May 2025 – August 2025

Durham, NH

- Driving real-world AI solutions for underserved markets by deploying pragmatic, ethical machine learning models in cloud environments to empower small-to-midsize enterprises.

NextStep Health

Data Scientist – Intern

August 2021 – May 2022

Cambridge, MA

- Implemented on-prem models to predict patient outcomes using Python and TensorFlow
- Delivered internal tools that reduced turnaround time for data analysis by 30%
- Job Skills: Python, Multi-Model Classification, Cloud Deployment, Data Analysis, Data Visualization, Tableau, Power-BI

Liberty Mutual

Software Engineer

May 2021 – May 2022

Dover, NH

- Fostered code reuse by creating a shared Python library, reducing code duplication by more than 80%
- Optimized new data storage and retrieval system using AWS S3, reducing on-premise storage costs by 25%
- Job Skills: Python, AWS, Azure, Docker, Git, Go, Java, Data Storage and Retrieval

UNH Interoperability Lab

Senior Test Engineer

June 2018 – May 2021

Durham, NH

- Reviewed and engineered test media for IEEE Standard 802.3, improving test coverage for back-plane and Base-T
- Job Skills: Python, C++, Java, Test Engineering, Standardization, IEEE 802.3, Robotics, Hands on Experience

Technical Skills

Tools: Pythom, Tableau, Power-BI, AWS, Azure, Docker, Git, Go, Java, TensorFlow, PyTorch, Agentic AI, LangChain

Skills: AI, Deep Learning, Large Scale Data Analysis, Machine Learning Research, Computer Vision, Optimal decision-making, Human LLM Collaboration, Reinforcement learning, Risk sensitive machine learning, Transformers, LLMs, Scientific Publication

Soft Skills: Science Communication, Idea Organizer, Team Player, Problem Solver, Critical Thinker, Self-Motivated, Strong Work Ethic, Leadership, Collaborator

Publications

ROIL: Robust Offline Imitation Learning | *First publication accepted to RLJ (Reinforcement Learning Journal)*

- Led novel research on a robust method for training agents from data using offline imitation learning, surpassing previous work by leveraging consistent policy sets
- Improved on all existing IRL methods by allowing for covariate shift, which is common in the real-world

Deep Reinforcement Learning based Optimization of an Island Energy-Water Microgrid System

Interdisciplinary work with UNH Civil Engineering Dept.

- Developed a deep reinforcement learning model to optimize the energy and water usage of an off-shore microgrid
- Real-world RL application which resulted in a 20% increase in island sustainability, with less human intervention

LLM Thematic Analysis for Agriculture Research

Preprint

- Led collaboration with UNH Agriculture Dept. to develop a thematic analysis pipeline for categorizing research laboratories across the USA
- Implemented a human-in-the-loop LLM system to improve accuracy and reduce workload, leveraging LangChain

Achievements

- Technical reviewer for the **Reinforcement Learning Journal**
- Presented at the *first* **RLC (Reinforcement Learning Conference)** in 2024
- Received the **Dean's Award** for Academic Excellence in Computer Science
- Awarded the **President's Scholarship** for academic achievement and leadership
- Graduated **summa cum laude** from the University of New Hampshire
- Presented at the **2022 UNH Undergraduate Research Conference**