

Diego Llanes

Bellingham, WA, USA

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ABOUT ME

I am a machine learning researcher specialized in deep learning, reinforcement learning, control, complex systems, and dynamical systems; I am passionate about advancing the field of control through data.

EXPERIENCE

Scientific Machine Learning Masters Intern

Remote, Richland, WA, USA

Pacific Northwest National Laboratory

Jul 2022 - Present

- Benchmarked Differentiable Predictive Control against traditional Deep Reinforcement Learning algorithms for building control systems and contributed to open-source projects.
- Collaborated with domain experts to model building energy dynamics and optimize control policies for energy efficiency.
- Created multiple physics-based dynamical systems for the training and evaluation of control agents.
- Developed a strong foundation in control theory, reinforcement learning, and differentiable programming for real-world applications.

Deep Learning Research Assistant

Bellingham, WA, USA

Hutchinson Machine Learning Research Group

Sep 2022 - Present

- Designed and trained computer-vision inspired architectures for hyperspectral data to estimate stellar parameters, surface gravity, metallicity, and temperature.
- Developed an autoregressive diffusion methodology for predicting spatio-temporal trends of climate data on a global scale.
- Engaged in weekly reviews of state-of-the-art research for deep learning approaches and techniques.
- Contributed to open-source software to increase accessibility of high-throughput compute to new users.

Graduate Course Teaching Assistant

Bellingham, WA, USA

Western Washington University

Mar 2023 - Present

- Developed visualization tools and worksheets to teach complex machine learning concepts effectively.
- Delivered lectures on advanced topics, bridging theoretical knowledge with practical applications.
- Mentored students individually, supporting their academic and professional growth.

TECHNICAL SKILLS

Programming Languages: Python, JavaScript, R, Go, Java, C, C++, HTML, CSS, SQL

Libraries and Frameworks: PyTorch, NumPy, TensorFlow, Gymnasium, CUDA C, React, ROS

RESEARCH INTERESTS

Control Theory, Robotics, Reinforcement Learning, Dynamical Systems, Natural Language Processing

PROJECTS

Neural Network From Scratch

Jan 2023

Developed a neural network package in Python using only NumPy, supporting forward/backward propagation, non-linear activations, and gradient descent for both classification and regression tasks.

EDUCATION

Western Washington University, Bellingham, WA, USA

Sep 2023 - Jun 2025 (Expected)

Master of Science in Computer Science

4.0 GPA

Western Washington University, Bellingham, WA, USA

Jan 2021 - Jun 2024

Bachelor of Science in Computer Science

3.6 GPA