

Nina Ervin

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EDUCATION

Master of Science Computer Science Emphasis in AI

University of California, San Diego, San Diego, CA

Sep 25 – Dec 26 (anticipated)

- **Extracurriculars:** Society of Women Engineers (SWE), Engineers Without Borders (EWB)
- **Relevant Coursework:** Data Mining & Recommender Systems, Probabilistic Reasoning and Decision-Making

Bachelor of Science Computer Science, Outstanding Graduate in Computer Science, Magna Cum Laude

GPA: 3.98

Western Washington University (WWU), Bellingham, WA

Sep 23 – Jun 25

- **Awards:** CS Distinguished Scholars Scholarship Award (24), Grace Hopper Conference Funding (24), President's list (23-25)
- **Extracurriculars:** Society of Women Engineers (SWE), Computer Science Distinguished Scholars (23-25)
- **Relevant Coursework:** NLP, Machine Learning, Deep Learning, Linear Algebra, Probability, Algorithms and Data Structures

Associate of Science, Graduated with Honors, Washington State Running Start Program

GPA: 3.94

Cascadia College, Bothell, WA

Sep 21 – Jun 23

EXPERIENCE

Lead Undergraduate Researcher - Hutchinson Machine Learning Research, Pacific Northwest National Labs Mar 24– Jun 25

- Engineered deep learning models for climate forecasting with efficient compression, for climate scenario analysis.
- Communicated actionable insights from research by presenting findings to climate experts at Pacific Northwest National Labs (PNNL) and adapting explanations for diverse audiences.
- Enhanced collaboration and knowledge exchange by successfully leading and contributing in small, fast-moving teams
- Sharpened presentation and communication skills by delivering quarterly presentations on research.

Computer Science Tutor – Western Washington University

Sep 24 – Jun 25

- Facilitated the learning process for diverse groups of students by providing guidance on computer science and problem-solving techniques, leading to improved academic performance.

International Collegiate Programming Competition (ICPC) – Regionals

Feb 24

- Demonstrated competitive programming skills by achieving 4th place at a local programming competition.

PROJECTS

Earth System Model (ESM) Emulator, Hutchinson Machine Learning Research Group, PNNL – Python, PyTorch, LaTeX

- Implemented an end-to-end variational autoencoder, achieving 164x compression for latent space storage and facilitating data analysis, with Mean KS scores of 0.016 (generated vs. test) and 0.015 (validation vs. test).
- Enhanced project codebase by merging a 2-variable model into an updated code base to help improve model capabilities.

Energy-Efficient Transformer Analysis for Climate Misinformation Detection – Python, PyTorch, Hugging Face, BERT

- Designed and fine-tuned transformer-based LLM models of varying parameter sizes on climate misinformation claims from social media, achieving 75% precision while reducing fine-tuning CO₂ emissions by 29x and pretraining emissions by 217,000x, highlighting the impact of model scaling on computational efficiency and carbon footprint in NLP applications.

Machine Learning for Predicting Day Based on Daily Average Temperature– Python, PyTorch, NumPy, LaTeX

- Achieved top performance, getting a MSE = 0.0003 and predicting <1 day off on unseen test data by designing a vision transformer, optimizing hyperparameters, conducting in-depth analyses, and authoring a performance report.

Machine Learning for Predicting Product Ratings– Python, PyTorch, NumPy, LaTeX

- Delivered best-in-class results, getting a MSE = 0.73 on unseen test data by designing an ensemble of models, optimizing through hyperparameter tuning, conducting in-depth analyses, and authoring a performance report.

LANGUAGES & SKILLS

Languages & Packages: Python, SQL, R, Java, C, PyTorch, TensorFlow, Hugging Face, scikit-learn, NumPy

Technical Skills: Git, deep learning, statistical modeling, data mining, data pipelines, Linux, LaTeX, optimization

Soft Skills: critical thinking, communication, problem solving, working in teams, time management, relationship skills