Loc Nguyen

(571) 992-3166 | nguyhuup@oregonstate.edu | Website

EDUCATION

Oregon State University Corvallis, OR
(B.S.) in Computer Science & (B.S.) in Mathematics *Jan 2026 – Present*
GPA: 3.97 / 4.0 | Major GPA: 4.0 / 4.0

RESEARCH EXPERIENCE

Undergraduate Research Assistant June 2026 – Present
Polaris Lab, Oregon State University *Corvallis, OR*

- Developing parallel algorithm for prediction-based compression/decompression of unstructured data.
- Designing two parallel approaches: multi-source chain for OpenMP and wavefront for CUDA, improving runtime by 3x and compression ratio by 7x for looser relative error bounds on the MPAS-A dataset.
- Currently working on improving the predictor based on shape analysis tools.

Student Cluster Competition Connect (SC26) Apr 2026 – Nov 2026
Team Oregon *Corvallis, OR*

- Optimizing Multiphase Flow Code (MFC) and tuning NVIDIA NCCL benchmarks on dual NVIDIA H100 GPUs and Intel Xeon Gold 6548Y+ processor, sponsored by NVIDIA Launchpad.

URSA Engage Program (upcoming) Feb 2027 – May 2027
Department of Mathematics, Oregon State University *Corvallis, OR*

- Working under the guidance of Professor Nicholas Marshall and his PhD student to accelerate iterative $A\vec{x} = \vec{b}$ solver for non-symmetric matrices.

PROJECTS

DAM Robotics Club, Underwater Team Jan 2026 – June 2026

- Built a computer vision program for autonomous invasive crabs identification, contributing to a 27th/36 finish at the MATE ROV World Championship (Explorer Class) | Github

Directed Reading Program Apr 2026 – June 2026

- Studied Spectral Graph Theory under the guidance of a PhD mentor, analyzing graph Laplacians and Fiedler vectors for optimal graph partitioning | Presentation

AWARDS

Honorable Mention, 2026 Mathematical Contest in Modeling — Jan – Feb 2026
Oregon State University **Regional Award** Scholarship: $12,000 annually — Jan 2026
Meritorious Award, SIMIODE Challenge Using Differential Equations Modeling — Oct – Nov 2025
Second Prize, Vietnamese Mathematical Olympiad, rank 23rd nationally — 2024 – 2025
Third Prize, Vietnamese Mathematical Olympiad, top 150 nationally — 2023 – 2024

RELEVANT COURSEWORK & TECHNICAL SKILLS

Mathematics: Linear Algebra (MTH341), Sequences & Series (MTH253Z), Foundations of Mathematics (MTH310)
Computer Science: Intro to CS (CS162)
Independent Study: Parallel Programming (CS475), Applied Probability (MIT OCW 6.041), Linear Algebra (MIT OCW 18.06)

Languages: C++, CUDA, Python, PowerShell
Tools & Environments: OpenMP, Slurm, Linux, Git