

Suryash Malviya

☎ (607)-262-1584 | 📍 Ithaca, NY | ✉ thesuryash@gmail.com | 🌐 thesuryash | 📄 thesuryash | 🌐 suryash.com

EDUCATION

Ithaca College

Ithaca, NY

BS – Double Major in Applied Physics & Computer Science w/ Mathematics Minor (GPA: 3.49/4.00) Aug 2022 – Present

- Coursework: Quantum Mechanics, Machine Learning, Linear Algebra, Differential Equations for Engineers, Statistics

Cornell University

Ithaca, NY

Visiting Student

Aug 2023 – Present

- Coursework: Differential Equations for Engineers, Linear Algebra, Digital Logic & Computer Organization, Statistics

EXPERIENCE

CS Researcher / Research and Teaching Assistant

Aug 2024 – Present

Ithaca College

Ithaca, NY

- Conduct research at the intersection of large language models, GPU programming, and scientific computing under faculty mentorship.
- Contributed code merged into Apple's MLX repository(#2220), strengthening experience with ML infrastructure and performance-oriented computational workflows.
- Built and experimented with LLM-based pipelines using HuggingFace, OpenAI API, and LLaMA models for structured information extraction and knowledge-centered systems.
- Worked across physics, computing, and mathematics contexts, supporting research in algorithm design, data analysis, and computational problem solving.

Unity Developer

June 2024 – Present

Cornell University's Center for Teaching Innovation

Ithaca, NY

- Developed simulation-driven systems in Unity and C# for electromagnetism education, reinforcing experience in modeling physical systems computationally.
- Designed modular pipelines for simulation logic, data flow, and scalable technical content generation.
- Collaborated with interdisciplinary faculty and technical teams on scientific visualization and immersive learning technologies.

Research and Teaching Assistant

Aug 2022 – Present

Ithaca College Physics Department

Ithaca, NY

- Conducted research across physics education, astrophotography, optics, and environmental physics, building a strong applied-physics foundation for quantum and computational work.
- **Dana Summer Scholar 2023:** Performed CCD-based astrophotography research involving instrumentation, data collection, and image-processing pipelines.
- Supported technical communication and instruction in physics, strengthening the ability to explain mathematically and conceptually dense material.

PUBLICATIONS AND CURRENT RESEARCH

Co-authored publication in the **Journal of Computing Sciences in Colleges (JCSC)** on dynamic programming and algorithm optimization.

Researching quantum computing and machine learning integration, with interests in quantum algorithms, error correction, and computational frameworks for emerging quantum systems.

Developing technical depth across Qiskit-based workflows, scientific computing, GPU-accelerated ML systems, and mathematically grounded modeling plugin for Unity.

RELEVANT SKILLS

Quantum Computing: Qiskit, Qiskit IBM Runtime, AerSimulator, Quantum Algorithms, Quantum Machine Learning, Error Correction

Scientific Computing: Python, NumPy, Data Analysis, Mathematical Modeling, Scientific Visualization

Machine Learning & Compute: PyTorch, TensorFlow, HuggingFace, OpenAI API, LLaMA, MLX, GPU Programming, CUDA

Programming: Python, C#, Java, C++, R, Git, Linux

Mathematics & Physics Foundation: Linear Algebra, Differential Equations, Statistics, Quantum Mechanics, Classical Mechanics

Research: Algorithm Optimization, Data Processing, Technical Writing, Interdisciplinary Scientific Research