



Undergraduate student at **Rensselaer Polytechnic Institute** majoring in Applied Physics

Research · Computational Physics · UI/UX Design · Web & Software Development · Musician

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Current Research

2024 ***Ultra-long-distance power transmission and space-based energy capture***

As lead researcher of the [Project Elara team](#), I conduct research into modeling electromagnetic power transmission for space-based power transfer by conducting finite-element simulations.

2025 ***Machine learning-assisted material prediction and simulation for laser active media***

As part of the [Materials Intelligence group](#), I utilize machine learning to be able to predict materials optimally-suited for laser gain media for building high-performance lasers.

Work experience

Current **Head of Project Elara organization**

I supervise [Project Elara](#), a volunteer-driven organization whose mission is to work on research projects dedicated to improving the world.

Current **Undergraduate researcher**

I work as an undergraduate researcher for the [Materials Intelligence group](#) at Rensselaer, which specializes in using machine learning to accelerate materials discovery and advance materials science research.

Current **Community administrator and designer to the Natron project**

Since 2022, I have been a community contributor and designer for [Natron](#), an open-source compositing software for VFX and digital artists.

Skills and knowledge

Art, Music & Design

UI/UX, poster & icon design
Figma, Blender, Inkscape
Classical piano, composing

Research

Scientific computing
Numerical simulations
Quantum physics

Programming

Open-source projects
Python, JavaScript, Rust
Machine learning

Web development

Websites/web apps
Flask, Jekyll, CSS/Sass
Responsive design