

HRISHIKESH BELAGALI

Undergraduate Student

📍 East Lansing  github.com/lonelyneutrino0

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SUMMARY

Undergraduate CS and Math double major interested in high performance computing, Monte Carlo methods, Quantum Algorithms and other optimization techniques

SKILLS

Languages: Python, \LaTeX , JavaScript, C++

Packages: NumPy, PyTorch, Matplotlib

Softwares: LAMMPS, OVITO, pyMOL

EDUCATION

2022 - 2024	High School Diploma	Sri Kumarans Children's Home
2024 -	Computer Science (B.S) Enrolled full time	Michigan State University
2024 -	Mathematics Advanced (B.S.) Enrolled full time	Michigan State University

PROJECTS

Python OVITO pyMOL	Genetic Annealing to Determine Protein Structures github.com Hybrid genetic annealing algorithm to determine protein structures through the optimization of Irback's off-lattice model energy equation ($RMSD < 3.0$). Use of molecular dynamics to simulate protein folding.
Python	Helium Ground State Wavefunction Determination github.com Determination of the ground state wavefunction of Helium and ground state energy using Variational Quantum Monte Carlo and genetic annealing.
Python	Quadratic Unconstrained Binary Optimization github.com Stochastic Tunneling-enhanced Simulated Annealing for solving QUBO-type problems.
Python	Monte Carlo Integration github.com Monte Carlo Integration with importance sampling to numerically evaluate complex integrals.