

EESH GUPTA

Undergraduate Student in Physics
Rutgers University, New Brunswick NJ

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RESEARCH INTERESTS

Quantum Computing & Many Body Physics:
Variational algorithms, error mitigation, applications to chemistry

EDUCATION

Rutgers University	2019 - Present
B.S. in Physics	
B.A. in Computer Science	
Societies: Society of Physics Students, Rutgers Concert Band	

RESEARCH EXPERIENCE

Undergraduate Research Assistant, Rutgers University	2019-Present
Supervisor: Stephen Schnetzer, Ph.D.	
Topic: Quantum computations of molecular ground states; investigating Variational Quantum Eigensolver (VQE) in computing ground state energy of the Hydrogen molecule; Comparing noise amplification techniques in Zero Noise Extrapolation (ZNE)	

Research Assistant, Summer Science Program Aresty Research Center, Rutgers University	Summer 2020
Supervisor: Stephen Schnetzer, Ph.D.	
Topic: Error mitigation; Analysis of Polynomial and Richardson Extrapolation in error mitigating computation of molecular ground state of the Hydrogen molecule.	

Research Programming Intern University of Nebraska-Lincoln	Summer 2018
Supervisor: Ashu Guru, Ph.D.	
Topic: Agricultural Education; front-end programming on "Apocalypse 2050" project; investigated criteria for effective, educational video games	

PRESENTATIONS

Poster Presentation, “Error Mitigating Quantum Computation of Molecular Ground States,”
Aresty Summer Science poster presentation, July 2020.

Talk, “Quantum Computing Electronic Structure” Summer 2020
Delivered to:

- Governor’s School of New Jersey
- NJAAPT Workshop on Quantum Computing for High School Teachers
- The Remsing Group, Rutgers University
- Stephen Schnetzer’s Vector Like Quarks (VLQ) group

HONORS AND AWARDS

IBM Qiskit Advocate Certification 2020
Recognized for contributions (code, outreach) to IBM’s quantum computing community

Dean’s List 2019- Present
Rutgers University

AP Scholar with Distinction 2019
Edison High School, NJ