

## Education

2021–2025 : **B.S/M.S: Computer Science, B.S: Mathematics**, *University of Washington, Seattle*,  
Relevant Coursework: .

- **Math:** Quantum Probability Theory, Combinatorial Optimization, Modern Algebra, Accelerated Advanced Honors Calculus, Advanced Linear Algebra
- **Computer Science:** Markov Chains, Graduate Algorithms, Graduate Natural Language Processing, Quantum Computing, Toolkit for Modern Algorithms, Introduction to Algorithms, Complexity Theory, Machine Learning, Data Structures.

GPA : 3.93/4.0

## Research experience

### Publications and Pre-prints

July 2024 **Alex Albors, Hisham Bhatti, Lukshya Ganjoo, Raymond Guo, Dmitry Kunisky, Rohan Mukherjee, Alicia Stepin and Tony Zeng**, On the Structure of Bad Science Matrices, In: *arXiv preprint arXiv 2408.00933*.  
In review at [Involve](#)

### Ongoing research

Jun 2024 – **Approximation algorithms for solving quantum max cut**, [slides](#), (Pending arXiv sub-  
Aug 2024 mission), [Current manuscript](#).

I am presently working with Professor Andrea Coladangelo and Professor Chinmay Nirkhe, where we're focused on developing approximation algorithms to find a high energy state of the QMC Hamiltonian. This Hamiltonian while serving as a generalization to the computational problem of finding a maximum cut, is also physically motivated since it models anti-ferromagnetic Hamiltonians.

Advisor : **Dr. Andrea Coladangelo**, Assistant Professor, Department of Computer Science & Engineering([Personal Web-page](#))

Advisor: **Dr. Chinmay Nirkhe**, Assistant Professor, Department of Computer Science & Engineering([Personal Web-page](#))

### Talks/Reading

December 2023 **Matrix Completion via Randomized Basis Pursuit**, CSE 521: Advanced Algorithms, University of Washington: [slides](#).

March 2024 **Commutative Algebra and Algebraic Geometry**, Washington Directed Reading Program 2024, University of Washington: [slides](#).

May 2024 **Error estimates and asymptotic analysis for exact qudit universality**, Undergraduate Research Symposium 2024, University of Washington: [slides](#).

## Teaching

- Winter 2025 **TA - CSE 422: Advanced Toolkit for Modern Algorithms**, UW CSE.
- Taught an advanced undergraduate class on the principles of modern algorithms with a particular focus on machine learning algorithms.
  - Initiated weekly sections for 30+ students, grading 40+ assignments weekly and conducting office hours
- Fall 2023, **TA - CSE 534: Graduate Quantum Computing**, UW CSE.
- 2024:
- Taught a special topics graduate class on quantum computing and algorithms.
  - Initiated weekly sections for 20+ students, grading 100+ assignments weekly and conducting office hours
- Spring, 2024: **TA - CSE 434: Introduction to Quantum Computation**, UW CSE.
- Taught a special topics undergraduate class on quantum computing and algorithms.
  - Initiated weekly sections for 30+ students, grading 100+ assignments weekly and conducting office hours
- Winter, 2024: **TA - CSE 417: Algorithms and Computational Complexity**, UW CSE.
- Taught a class on designing and analyzing algorithms and data structures, along with efficient models of computation intended for a general undergraduate audience.
  - Initiated weekly sections for 20+ students, grading 100+ assignments weekly and conducting office hours
- Spring, 2023: **TA - CSE 311: Foundations of Computing I**, UW CSE.
- Taught a class focusing on the fundamentals of logic and computation intended for a general undergraduate CS audience.
  - Initiated weekly sections for 25+ students, grading 200+ assignments weekly and conducting office hours.
- Winter, 2023: **TA - CSE 446: Introduction to Machine Learning**, UW CSE.
- Taught an introductory class on machine learning intended for an advanced undergraduate CS audience.
  - Initiated weekly sections for 15+ students, grading 100+ assignments weekly and conducting office hours.
- Fall, Summer **TA - CSE 312: Foundations of Computing II**, UW CSE.
- 2022:
- Taught an introductory class on probability and statistics intended for a general undergraduate CS audience.
  - Initiated weekly sections for 25+ students, grading 200+ assignments weekly and conducting office hours.

## Languages and Skills

Languages Java, Python, Lean, OCaml, C++, C, Racket, Javascript, SQL, MySQL

Technologies  $\LaTeX$ , Mathematica, Git, Jupyter Notebooks, AWS, PyTorch, TensorFlow