

# CYNTHIA RICHEY

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## EDUCATION

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### Bachelor of Science in Computer Science

2019 - March 2023

Paul G. Allen School of Computer Science & Engineering, University of Washington, GPA: 3.63

## SELECTED COURSEWORK

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Data Structures & Algorithms ◊ Hardware/Software Interface ◊ Relational Database Management Systems  
Functional Programming ◊ Foundations of Computing ◊ Information Ethics & Policy ◊ Advanced Algorithms

## WORK EXPERIENCE

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### Geneial

June 2021 (*ongoing*)

*Software Engineer Intern*

- Created a proof of concept supporting exact-match querying of an encrypted genomic database, using Google's open-source homomorphic encryption (HME) transpiler.
- On the basis of my work, Geneial secured a contract with a leading American medical university to work HME technologies into their data pipeline.
- Primary development in C++; other technologies included Linux (Ubuntu), AWS, and Bazel.

### UW Math Study Center

September 2020 (*ongoing*)

*Tutor*

- As an official employee of the UW Math Department, tutored students in precalculus and calculus (MATH 120, MATH 124/5/6).
- 12-hour weekly commitment alongside a full-time courseload.

## PROJECTS

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### Tetris

December 2021

*School Project*

- Used the Racket programming language to build and subsequently extend a game of Tetris.
- Worked with an existing codebase to demonstrate understanding of OOP concepts like subclassing, overriding, augmentation, and dynamic dispatch, among others.

### Census Reader

June 2021

*School Project*

- Implemented a census reader, based on data from the 2010 census, capable of retrieving population information about a specified geographic area in parallel. Used Java's Thread class and the ForkJoin framework.

### Washington Directed Reading Program, Mathematics

Autumn 2020

*Research Project*

- Participated in a mathematics reading program on elliptic curves, mathematical objects with cryptographic applications, mentored by PhD student Thomas Carr.

## HONORS & AWARDS

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Dreama Frost Endowed Scholarship, Leo Maddox Foundation Scholarship

## SKILLS & HOBBIES

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### Skills

Programming, Writing, Problem Solving, Calculus, Algorithm Design

### Languages & Technologies

Java, C, C++, SQL, Linux, AWS, Git, OCaml, Racket