**Rodney McCoy**

208-860-4186 | Salt Lake City, UT, 84116 | [rbmj2001@outlook.com](mailto:rbmj2001@outlook.com) | rodneymccoy.com

**PROFESSIONAL SUMMARY**

1st Year Mathematics Graduate Student with experience in pure mathematics and algorithms. Interested in applying breadth of knowledge to solve difficult, critical, real-world problems.

**EDUCATION**

**Ph.D. in Mathematics**

* University of Utah | Salt Lake City, UT | *Expected May 2028*

**Bachelor of Science in Mathematics - General**

**Bachelor of Science in Computer Science**

University of Idaho | Moscow, ID | August 2019 – May 2023

* Cumulative GPA: 3.83 / 4.0 | Dean’s List

**EXPERIENCE**

**Software Developer**, Keyport, WA | Keyport Naval Base | May 2023 – July 2023

* Developed VR based software.
* Practiced Software Engineering Principles, Utilizing Advanced C# Language Features.

**Tutoring**¸ Moscow, Id | University of Idaho | August 2022 – May 2023

* Taught students fundamental mathematical principles and techniques / best practices for writing mathematical proofs
* Instructed over a wide variety of courses from the Calculus Series to Theory of Computation and Data Structures / Algorithms

**Eagle Scout Award** | *April 2016*

* Organized a group of 10+ people in a leadership project to repair props used by high schools’ cheer team.
* Preserved and protected the environment by practicing leave no trace and emphasizing sustainability.

**PROJECTS**

**Undergraduate Research (Ongoing)** | Fall 2022

* Python implementation of standard permutation algorithms (converting between 1-line, disjoint cycles, transpositions) and implementations of metrics on the symmetric group of permutations
* Analysis and conjecture about proving a necessary and sufficient condition for equality of equation of metrics over signed permutations

**Probabilistic Algorithms in Cryptography** | Fall 2022 | <https://github.com/RodneyMcCoy/probabilistic-algorithms>

* Discussion of necessity of probabilistic algorithms, including Theoretical and Practical Computational Complexity
* Implementation of multiple probabilistic algorithms, pseudo random number generators, primality tests, etc
* Visualizing results using Matplotlib and Jupyter Notebook

**SKILLS**

Proficient in C / C++ | Python | C#

Knowledgeable in GitHub | LaTeX

Familiar with Linux