Maximiliano Eaton

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Education

University of Colorado, Boulder – BS in Computer Science and Applied Mathematics — Expected May 2026

- **Cumulative GPA:** 3.988
- Computer Engineering Minor
- Engineering Honors Program
- Relevant Coursework: Digital Logic, Linear Programming, Concurrent Programming

Skills

Technical: C/C++, Python, Rust, Java, Git, GDB, numpy, TensorFlow, SystemVerilog, CodAL
Languages: English, Japanese

Experience

Teaching Assistant / Course Assistant, University of Colorado, Boulder – Boulder, CO — June 2024 – Present

- Assist both Computer Organization (CSCI 3593) and Theory of Computation (CSCI 3434) for Fall as teaching assistant and assisted both Computer Systems (CSCI 2400) and Operating Systems (CSCI 3753) for Summer as course assistant
- Develop new problem sets on a weekly basis and collaborate with course team to draft rubrics
- Created automatic grading systems from inception reducing manual workload by roughly 80%

Undergraduate Researcher, University of Colorado, Boulder – Boulder, CO — May 2023 – October 2023

- Optimized computer simulation for archaic genomics to trace lineage of neanderthals
- Parallelized tasks on CU's Research Computing facilities for better performance of machine learning models
- Contributed on poster for Society for Molecular Biology and Evolution conference (2023)

Software Intern, Dataquest – Boulder, CO — July 2021 – October 2022

- Implemented checkers to determine correct user submissions for the online platform to learn data science skills
- Resolved bugs submitted by users and beta tested new content whenever deployed

Projects

Four Coloring Simulator — April 2022 – July 2024

- Created interactive visualization tool accompanied by inciting paper available at maxeaton.github.io/fct/
- Developed novel approach to four coloring a graph outlined by math paper written during high school
- Utilized specialized data structures and traversal techniques to implement algorithm

Primomata — May 2023 – July 2023

- Created tool that converts between different forms of regular languages, namely NFA, DFA, and regex
- Implemented different algorithms to manipulate DFAs to find properties of prime numbers
- Visualized automatas using dotLang for both NFAs and DFAs to see relationships
- Pursued the subject further by taking a formal Theory of Computation course and subsequently became a TA

Genome Tracing — February 2023 – March 2023

- Derived minimal gene mutation paths to determine possible lineage of genetic strain
- Pruned branches and utilized bit masking to increase efficiency

Probabilistic Sudoku — June 2022 – July 2022

- Generated random sudoku puzzles and ensured feasibility by backtracking to determine existence of unique solution
- Explored to design a statistical solver to more efficiently solve NP-complete problem