Maximiliano Eaton

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Education

University of Colorado, Boulder – BS in Computer Science and Applied Mathematics Expected May 2026
- Major GPA: 4.000; Cumulative GPA: 3.988
- Computer Engineering Minor
- Engineering Honors Program
- Relevant Coursework: Algorithms, Theory of Computation, Linear Programming

Skills

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

Experience

Course Assistant, University of Colorado, Boulder – Boulder, CO June 2024 – Present
- Assisted both Computer Systems (CSCI 2400) and Operating Systems (CSCI 3753) over the summer
- Conducted office hours to provide additional support and clarification on course material
- Collaborated with course teams to organize lab help and midterms reviews to support students

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)

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

Primomata github.com/MaxEaton/Primomata
- Created tool that converts between different forms of regular languages, namely ε-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
- Inspired me to further pursue subject by taking a formal Theory of Computation course

Genome Tracing github.com/MaxEaton/GenomeGraph
- Derived minimal gene mutation paths to determine possible lineage of genetic strain
- Pruned branches and utilized bit masking to increase efficiency

Probabilistic Sudoku github.com/MaxEaton/sudoku
- Generated random sudoku puzzles and ensured feasibility by backtracking to determine existence of unique solution
- Attempted to design a statistical solver to more efficiently solve NP-complete problem

Grid Combinatorics github.com/MaxEaton/Grid
- Computed the number of unique patterns of dots in a grid under rotational and translational symmetry
- Utilized bit manipulations and specialized data structures for optimization