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THOMAS STOUGHTON

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EDUCATION

UNIVERSITY OF COLORADO AT BOULDER (AUG 2020 – MAY 2024 [EXPECTED])
B.S. in Computer Science, Computational Biology Minor, Applied Mathematics Minor
Engineering Honors Program, 3.87 GPA

POOLESVILLE HIGH SCHOOL (AUG 2016 – MAY 2020),
Science, Math, and Computer Science (SMCS) Magnet Program
Honor Roll, 4.72 weighted GPA, National Honors Society

EXPERIENCE AND SKILLS

Synthetic Biology Research at CU Boulder (May 2021 - Present) — Writing an API to facilitate communication between two genetic circuit design tools, SBOLCanvas (https://sbolcanvas.org) and iBioSim. Worked closely with undergraduate and graduate students under Dr. Chris Myers, and presented my work at the International Workshop on Biodesign Automation in September 2021.

International Competition in Modeling (Feb 2021) — Five-day competition, developed a JavaScript based visual approach to modeling a large dataset of musicians and several parameters used by streaming services that describe their general musical features. Generated measures to find the similarity between a chosen musician and every other musician, and displayed the similarities via a web of color-coded nodes.

Computer Science Internship at Montgomery College (May 2019 - Sept 2019) — Designed and coded an application in Java with the purpose of visualizing assembly code in order to teach the concept in college classes. Collaborated with two undergraduate computer science students and professor Dr. David Kuijt to complete the project. Led the graphics development and assimilation of the code into a final application.

2D Rigid-Body Physics Simulation (June 2018 – Present) — Independent coding project implementing vector-based kinematics and collision physics between rigid circular and rectangular objects. Working on implementation of spin, dampening, and more complex shapes.

- **Languages:** C++, JavaScript, Python, Java, HTML/CSS, Bash;
- **Concepts:** Object Oriented Programming, Algorithms, Data Structures, Software Development Practices (including Git & Docker), Assembly, Debugging, REST;
- **Classes:** Computer Systems, MV/Vector Calculus, Linear Algebra, Differential Equations, Statistics, Discrete Math, General Physics, Quantum Physics;