Theo Bragstad

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Education

University of Colorado Boulder Bachelor of Science in Computer Science Boulder, CO

GPA: 4.00 Aug 2021 - May 2025

Selected relevant coursework: Data Structures, Software Development Methods and Tools, Discrete Structures, Computer Systems, Principles of Programming Languages, Algorithms, Linear Algebra, Calculus 1-2, Physics 1-2, Engineering Ethics

Fairview High School IB/AP Programs, Magna Cum Laude, GPA: 4.69 W (3.99 UW), SAT: 1530

Relevant coursework: AP Computer Science A (4), AP Computer Science Principles (5)

Selected Skills: C++, C, JavaScript, Java, Python - HTML, CSS, EJS, Bootstrap - PostgreSQL, SQL - Node.js, Express, Postman - ReactJS - Docker, Git/GitHub, VS Code, Slack; problem solving, curiosity, creativity, attention to detail, teamwork

Experience

Undergraduate Research Assistant (Gil Lab) **Python, Google Colab** Aug 2022 - Pres

Development, analysis, and application of computer vision and ML-based object-identification algorithms to better understand the behavior of coral reef fish within social networks with the goal of improving conservation methods.

Selected Projects **see GitHub for full details and more projects**

• **lists** **PostgreSQL**, **Node.js/Express**, **JavaScript**, **EJS**, **HTML**, **CSS**, **Bootstrap**, **Docker**, **Google OAuth2 API** Dec 2022

Full-stack web app, using a variety of specialized Node modules such as Passport and Nodemailer; full-featured list/note/to-do app with a productivity-focused UI that is clean, appealing, intuitive, fast, detail-oriented, and enjoyable to use.

• **Ocean Exploration Game** **C++** Nov 2021

Highly interactive and variable map and text-based adventure/survival game with probability and other game mechanics, score saving, and a strong focus on object-oriented programming.

• **theobragstad.com** **HTML, CSS** Nov - Dec 2022

Personal website. Helped me learn about basic deployment, custom domains, and SSL for HTTPS secured websites.

• **IMProved** **PostgreSQL**, **Node.js/Express**, **JavaScript**, **EJS**, **HTML**, **CSS**, **Bootstrap**, **Docker** Nov 2022

Full-stack web app providing a comprehensive platform for participation in/management of recreational sports, especially for intramural college teams. Developed in a small team following Agile methodology with extensive documentation, use of Git/GitHub version control/project management, standup meetings, testing, and presentation.

• **Blockchain Simulator** **C++** Apr 2022

Infrastructure and interface for a basic blockchain-based cryptocurrency that implements the core features/concepts of a real blockchain that can be added to, mined, checked for validity, and more. Uses SHA-256 for hashing and nonce values for mining.

• **Modern Snake** **Java, Processing** May 2021

Enhanced version of the original snake game, with gameplay customization, unique graphics, animations, and more.

Activities & Leadership

Generation Exchange Mentor (Aug 2021 - Pres): connect with seniors and help them with technology-related issues.
CU Sports Analytics Club (Aug 2021 - May 2022): used technologies such as R to gain insights from sports data.
CU Boulder Google Developer Student Club (Nov 2021 - Nov 2022): workshops on various development technologies and tools.

Awards & Honors: CU Esteemed Scholar (President Hale), Be Boulder and Alumni Scholarships; Seal of Biliteracy (Spanish, Boulder Valley School District), National Merit Commended, AP Scholar with Distinction