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 coursework: Data Structures, Algorithms, Software Engineering/Dev. Methods and Tools, Intro to Data Science w/ Probability + Statistics, Computer Systems, Linear Algebra w/ CS applications, Discrete Structures, Calculus 1-2, Physics 1-2, Engineering Ethics, Machine Learning, Intro to AI, Intro to Cybersecurity, Object-Oriented Analysis and Design

Selected Skills: C++, C, Python, Java, JavaScript, HTML, CSS, EJS, Bootstrap, PostgreSQL, SQL, Node.js, Express, Postman, ReactJS, Docker, Heroku, Google Cloud, Git/GitHub, VS Code, Slack, pandas, NumPy, Matplotlib, R; Problem solving, curiosity, creativity, attention to detail, teamwork

Work 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/software/pipelines to study behavior of coral reef fish within social networks with the goal of improving conservation methods. Participate in and occasionally lead weekly meetings; collaborate with lab members on research projects; research ML methods.

Selected Projects (On GitHub)

• **lists app** **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, JavaScript** Nov - Dec 2022

Personal site, 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. 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 Platform** **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 hashing.

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

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

Involvement & Leadership

Generation Exchange Mentor (Aug 2021 - Pres): connect with seniors and help them with technology-related issues.

CU LeetCode Club (Jan 2023 - Pres): weekly meetings to work on problems and discuss approaches with other students.

CU Boulder Google Developer Student Club (Nov 2021 - Pres): workshops on various development technologies and tools.

CU Sports Analytics Club (Aug 2021 - May 2022): used technologies such as R to gain insights from sports data.

HackCU 9 (Mar 2023): built and presented dashboard web app concept for easy information access during emergency situations.

Selected 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, Fairview High School Magna Cum Laude (top 10%), SAT: 1530 (99th percentile)