

# Pete Smith

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## Education

University of Maryland, College Park

(Expected Dec 2024)

- Dual Degree: Bachelor of Science, Computer Science; Bachelor of Arts, History
- Minor, Trumpet Performance
- Cumulative GPA: 3.356 (Aug 2023)
- Relevant Coursework: Intro to Compilers; Intro to AI; Advanced Data Structures; Algorithms
- Member: Association for Computing Machinery; Multi-Agent Reinforcement Learning Reading Group; History Undergraduate Association

## Skills and Attributes

- Languages: Python, Java, C, Rust, Ruby, OCaml, Racket, HTML, CSS, JavaScript, SQL
- Frameworks: Bootstrap, jQuery, Plotly.js, Qt (PyQt) GUI
- Tools and Environments: Linux, VS Code, Eclipse IDE, version control (Git)
- Coding Skills: Debugging, good code readability
- Other Skills: Written and oral communication, teamwork, critical thinking, customer service

## Programming Projects

Comet Statistics (HTML, CSS, JS, Python, SQL)

(Web Dev Intern at UMD, Jun 2023 – Present)

- Using Plotly.js to render comet discovery, orbital element, and observation statistics in graph form
- Using Python to create an automated backend script that pulls from a local PostgreSQL database and multiple external databases; accounts for numerous subtleties in the way comet data is represented
- Presented the site as a contributed talk at the 33<sup>rd</sup> annual ADASS conference on Nov 8, 2023
- <https://sbnmpc.astro.umd.edu/cometInfo/> (note: site still in development)

Personal Website (HTML, CSS, JS)

(Personal Project, Jun 2023 – Present)

- Designing a website ( <https://www.psmit.dev/> ) focusing on user experience and mobile readiness
- Using JavaScript to implement features such as dark mode preference and nav bar animations
- Making calls to GitHub's REST API to display the ten most recent site changes

Fraud Plus: Interpreter and Compiler (Racket)

(Intro to Compilers at UMD, Oct 2023 – Nov 2023)

- Implemented an interpreter and compiler for a subset of Racket as defined by course faculty
- Introduced variable scoping, requiring significant attention to proper use of the runtime stack
- Introduced error detection and a larger set of type definitions to create a more feature-rich language
- Used proper stack discipline with nested expressions, ensuring no conflicts with the environment
- Ported features from a smaller subset, ensuring compatibility with error and scoping functionalities

## Work Experience

Web Development Intern (University of Maryland)

(Jun 2023 – Present)

- Creating a comet statistic site for the NASA Planetary Data System Small Bodies Node at UMD
- Creating a tool to automate converting from the “new” comet designation system to the “old” system
- Gaining a strong understanding of SQL, interacting with web APIs, and general web development