

# AMBROSE CAVALIER

## WHO AM I?

I'm a full-stack developer with a particular interest in combining widely separated disciplines in new ways.

In my spare time, I enjoy tinkering with my custom notes and wiki system, creating parsers for ancient languages, doing CAD design, handling large GIS datasets, experimenting with NLP, and embarking on many other technical projects.

## EXPERIENCE

May 2024 - Present  
full-time

### Full-stack Application Developer

[newspapersystems.com](https://newspapersystems.com)

Working on an innovative data visualization platform for monitoring backend servers and newspaper ad sales. Supervised several summer interns and was responsible for the design and implementation of many core modules in the first phase of development. Created a custom WebGL-based particle system engine and several 3D visualization packages, some utilizing emerging virtual reality technologies.

`Typescript / CSS / HTML / Bootstrap / SolidJS / Node.js / three.js / WebGL shaders`

2022-2023  
summer intern

### Full-stack Web Developer (intern)

[newspapersystems.com](https://newspapersystems.com)

Converted an old ad ordering system to a modern Javascript app with a responsive, mobile-ready UI. Wrote a custom source-to-source transpiler to convert Soy templates into Javascript. Also was responsible for frontend in Javascript, jQuery, and Bootstrap, as well as much of the backend code for an e-billing system. Helped brainstorm proper security and authentication flow before implementing.

`JS / CSS / HTML / Node.js / jQuery / Bootstrap / PASCAL-like in-house language`

2019  
summer intern

### Full-stack Web Developer (intern/project lead)

[tirestoyourspot.com](https://tirestoyourspot.com)

Developed a complete online tire-ordering system to owner's specifications. The customer can select car make/model/year, view inventory and pricing, choose a delivery time and location on a map, and order tires straight from the website. Saved the owner several hours a week responding to emails.

`Vue.js / Vuetify / Node.js / PHP / SQL / MochaJS / Linux VPS`

2018-2019  
part time

### 3D Topographic Data Technician (volunteer)

[brodheadcreekheritage.org](https://brodheadcreekheritage.org)

Collaborated with committee of local environmental and artistic professionals to design a 5ft x 5ft carved foam topographic map of Monroe County. Processed GIS data to create visualizations. 3D printed sections at various scale factors to help committee set design parameters. Prepared final file for CNC carving along with dimensions document.

`QGIS / Blender / Node.js`

## PUBLISHED PROGRAMMING PROJECTS

[ambrosecavalier.com/projects](https://ambrosecavalier.com/projects)

2022

### Greek Vocabulator

Used Emscripten to compile the C-based **morpheus** Greek parsing engine to Javascript. Created an intuitive UI for studying Ancient Greek texts, including an innovative Greek input area which does not require installing a operating system Greek keyboard. App can also be downloaded and used offline as a standalone HTML file.

2018-2019

### Monroe County Historical Maps

Used professional GIS software to georeference historical maps and aerial imagery. Presented to staff at Quiet Valley Historical Farm. Created online map viewer using LeafletJS.



[ambrosecavalier@gmail.com](mailto:ambrosecavalier@gmail.com)



**Christendom College** (Class of '24)

B.A. in Philosophy with Classics minor



[ambrosecavalier.com](https://ambrosecavalier.com)

## HONORS

2024 Class Valedictorian

2020-24 Dean's List / First Honors

2023 Inducted into Chester-Belloc Debate Society

2021 Inducted into ΗΣΦ Classics Honor Society

2016-17 Two US Patents (9,371,164 and 9,676,529) issued following mentorship through the DaVinci Science Center Inventors Lab program.