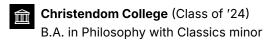


WHO AM I?

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.





@ ambrosecavalier.com

HONORS

2024	Class Valedictorian
2020-24	Dean's List / First Honors
2023	Inducted into Chester-Belloc Debate Society
2021	Inducted into $H\Sigma\Phi$ Classics Honor Society

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

gram.

EXPERIENCE

May 2024 -Present

full-time

Full-stack Application Developer

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.

2016-17

2022-2023 summer intern

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

2020-2021 summer intern

Full-stack Web Developer (intern)

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

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 (volunteeer)

brodheadcreekheritage.org

Collaborated with committee of local environmental and artistic professionals to design a $5ft \times 5ft$ 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

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.