William Andrew Mullins
Full Stack Software Engineer
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Software developer with a background in medical neuroscience research. Experienced in problem solving, data manipulation, team collaboration, and public speaking. Highly motivated by challenges especially those involving mathematics and visualization. Most interested in developing engaging, intuitive, and appealing front-end interfaces as well as creating clean and efficient back-end architectures.

SKILLS
Languages: JavaScript, MATLAB, Python | **Libraries and Frameworks:** Express.js, Mongoose, React.js, THREE.js, Next.js | **Databases:** MongoDB, Postgres | **Tools:** Linux, GitHub, VSCode, Figma

SOFTWARE DEVELOPMENT PROJECTS
El Capstone: *Interactive El Capitan Climbing Route Map* - GitHub
- Created a 3D El Capitan Navigator with THREE.js using React Three Fiber and Drei
- Used Next.js to reduce client side processing and increase server side efficiency
- Technologies used: **MongoDB, Next, React**

Nebula-Nav: *Educational Solar System Website* - GitHub
- Worked alongside three developers to collaboratively design and develop an interactive 3D educational model of the Solar System.
- Created front-end pages in React to make API calls to an Express and MongoDB backend.
- Implemented THREE.js to generate an interactive 3D model of our solar system.
- Technologies used: **MongoDB, Express, React**

Brain Atlas: *Brain Anatomy Website* - GitHub
- Developed an interactive model of the brain, allowing users to navigate the site and learn about the brain.
- Made RESTful API calls to an Express, MongoDB, Node.js backend allowing for full back-end CRUD on all collections and partial or full CRUD from the front-end depending on collection type and the user's admin status
- Created all models in Figma and styled all pages with vanilla CSS3
- Technologies used: **Javascript, MongoDB, Express**

WhacAMole: *Web Browser Game*- GitHub
- Designed a front end browser whac-a-mole game that gives the user options for difficulty and size of the gameboard. Deployed on Surge
- Technologies used: **Javascript, Figma**

PROFESSIONAL EXPERIENCE
Postbac IRTA, National Institutes of Health (NIH, NINDS) | Bethesda, MD   **July 2020 - March 2023**
- Scheduled, ran, and post-processed biweekly MRI imaging for longitudinal studies on Multiple Sclerosis using both routine, clinical scans as well as newer, experimental modalities on 3T and 7T machines for the Translational Neuroradiology Section (TNS)
- Developed software to segment brain and spine scans using MATLAB, Python, and ITK-SNAP.
- Analyzed disease progression as it relates to lesion burden, type, and location using Excel, SPSS, and R-Studio.
- Presented our research at the American Committee for Treatment and Research in Multiple Sclerosis (ACTRIMS) Forum.

Undergraduate Researcher, VUMC Department of Neurology | Nashville, TN   **April 2019 - May 2020**
- Conducted a study on applied atrophy network mapping to explain patterns of neuron loss in frontotemporal lobar degeneration patients using MATLAB.

EDUCATION
General Assembly | Software Engineering immersive Certificate   May 2023 - August 2023
Vanderbilt University | *Bachelor of Arts in Neuroscience | Minor in Medical Sociology*   August 2016 - May 2020
Honors: Cum Laude, Dean's List