Zachary White

860-942-9116 | zwhite03@tufts.edu | https://www.linkedin.com/in/zachary-white-455b37274/

EDUCATION

Tufts University   Somerville, MA
Bachelor of Science in Computer Science   *Aug. 2022 – Expected May 2026*

The Woodstock Academy   Woodstock, CT
High School Diploma   *Aug. 2018 – May 2022*

EXPERIENCE

Technical Lead   Jun. 2024 - Present
JumboCode at Tufts   *Medford, MA*
- Managed a team of 10 programmers, a designer, and a PM to deliver websites to local nonprofits
- Lead the team to build and program applications in React using Node.js and Nextjs
- Developed skills in fullstack development and the software engineering pipeline

Undergraduate Research Assistant in Human-Computer Interaction   Feb. 2024 – Present
Tufts University   *Medford, MA*
- Developed tasks and testing methods for analyzing perceived and actual mental workload while using LLMs
- Collected and analyzed data using tools in Python to evaluate mental strain (numpy, Matplotlib)
- Explored use cases for LLMs in creative contexts
- Study performed under Microsoft for testing of Copilot

Designer/Developer Fellow   Jun. 2024 – Present
Striide   *Somerville, MA*
- Currently designing and developing a navigation application centered around safety
- Practiced skills working in a team, as well as project control flow with git tools
- Utilized large databases and libraries like Mapbox API for optimized request delivery
- Explored the iterative design and development process in a real-world setting

PROJECTS

Reddit Politics Sentiment Analysis Dashboard | *React, PostgreSQL, Docker, GPT-4*   Feb. 2024 – March 2024
- Developed a full-stack web application with React as the frontend
- Implemented data-scraping technologies to gather data from several political Reddit forums
- Used GPT-4, and a self-trained model, to categorize political leaning from language and content
- Used Matplotlib to graph leaning trends over time daily and display on the frontend
- Additionally, gathered trending figures and topics that were also displayed on the page

JumboGPT | *Node.js, Express.js, React, RESTful APIs, MongoDB*   Jun. 2024 - Aug. 2024
- Developed an OpenAI wrapper for a chatbot desperate to recruit Tufts University students
- Developed a RESTful API in Express to handle logins, verification, and communication with OpenAI servers
- Utilitzed MongoDB to keep conversations between loads and efficiently index conversations using JWTs

Grep | *C/C++, Git, Data Structures & Algorithms*   Apr. 2023 – May 2023
- Developed a Grep implementation in the C programming language, mainly indexed in a hash table
- Utilized system for index times <2 minutes in file systems as large as the Gutenberg library ($\sim$800 GB)
- Utilized profiling tools such as qcachegrind to analyze bottlenecks in image processing for large files

TECHNICAL SKILLS

Languages: JavaScript, Python, C/C++, C#, SQL (Postgres), HTML/CSS, R
Frameworks: React, Node.js, Next.js, Express.js Tailwind, WordPress, Angular, Spring Boot, Flask
Developer Tools: Git, Docker, Google Cloud Platform, AWS, VS Code, Visual Studio, IntelliJ
Libraries: pandas, NumPy, Matplotlib
Publications: Visualization and Workload with Implicit fNIRS-based BCI, Co-Author
Relevant Coursework: Data Structures, Algorithms, Machine Structure & Assembly Language Programming, Human-Computer Interaction