JAVIER LAVEAGA AGUIRRE

Bethesda, MD | (202) - 744 - 6032 | Javier.Laveaga@tufts.edu | GitHub

EDUCATION

Tufts University – School of Engineering **Medford, Massachusetts**
Candidate for Bachelor of Science in Computer Science, Minor in French *Class of 2026*

- GPA: 3.89/4.00, Dean's List (Fall 2022, Spring 2023, Fall 2023, Spring 2024)
- Relevant Coursework: Intro to CS, Data Structures, Calculus III, Probability, Discrete Math, Linear Algebra, Machine Structure and Assembly Language Programming, Algorithms, Software Engineering
- Tufts in Talloires - France abroad program (Summer 2023)

Walt Whitman High School **Bethesda, Maryland**
High School Diploma *June 2022*

- GPA: 3.98/4.00, Certificate of Merit, Maryland Seal of Biliteracy-Spanish, AP Scholar with Distinction

EXPERIENCE

Tufts University - Center for Engineering Education and Outreach **Medford, Massachusetts**
Rogers Lab Software Development Intern *June-August 2024*

- Developing interactive, web-based interfaces for LEGO Education, using PyScript, integrating Python with HTML, CSS, and JavaScript to enhance user experience and functionality
- Creating lower-level communication protocols between multiple devices, ensuring seamless data exchange and synchronization in the LEGO SPIKE and Arduino Alvik platforms
- Collaborating closely with a team of 15 interns and engineers to implement kid-friendly access to advanced topics like machine learning and image processing

Tufts University - IDEA Lab **Medford, Massachusetts**
Undergraduate Researcher *February 2024-Present*

- Utilized a machine learning model and hyperspectral imaging to classify various types of plastic

Tufts University - School of Engineering **Medford, Massachusetts**
Research Assistant *February-April 2023*

- Analyzed survey data from 3,557 students across three academic years (2020-2022) to identify patterns and trends in collaboration with the Office of Institutional Research
- Collaborated closely with a team of 4 and the Undergraduate Engineering Dean to craft a final report

PROJECTS

Image Restoration Program *January 2024*

- Recovered corrupted PGM images, removing fake pixels and displaying the original image
- Leveraged David Hanson's C interface to facilitate quick string comparison with the atom interface

Command Line Interface (CLI) *December 2023*

- Implemented a CLI tool for searching words or character sequences within files in a directory
- Developed a modular hash table class, employing rehashing and chaining techniques using C++

Zap - Encoder and Decoder *November 2023*

- Implemented compression and decompression of text files using the Huffman coding algorithm in C++
- Constructed a Huffman tree using a priority queue and encoded ASCII text in binary format

Reverse Polish Notation (RPN) Calculator *October 2023*

- Designed and implemented a RPN calculator in C++ supporting basic arithmetic operations
- Crafted a flexible stack class integral to the calculator's functionality, supporting diverse variable types

SKILLS

Programming Languages: C, C++, Java, Python, JavaScript, PyScript, HTML & CSS, SQL, MATLAB
Software: Visual Studio Code, GitHub, Microsoft Office 365, Onshape
Extracurriculars: Mexican Culture Club (treasurer), International Club (Podcast editor), French Club, Piano
Languages: English (fluent), Spanish (fluent), French (proficient)