JAVIER LAVEAGA AGUIRRE

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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
- Relevant Coursework: Data Structures, Calculus III, Probability, Statistics, Discrete Math, Linear Algebra, Machine Structure and Assembly Language Programming, Algorithms, Software Engineering
- Tufts in Talloires - France abroad program (Summer 2023)

EXPERIENCE

Tufts University - Center for Engineering Education and Outreach   **Medford, Massachusetts**
Software Developer Research Assistant   *September 2024-Present*
- Fixing bugs and adding new features to a course website to enhance functionality
- Building an interactive synthesizer for undergraduates to learn about sine waves and sound

JumboCode   **Medford, Massachusetts**
Software Developer   *September 2024-Present*
- Collaborating with a nonprofit to address the challenge of manually managing educational resources for tutors serving adult immigrants in Greater Boston
- Designing and developing a streamlined library system that catalogs textbooks and resources, making it easier for tutors to access materials and support their students' language learning

Tufts University - Center for Engineering Education and Outreach   **Medford, Massachusetts**
Technology Development Intern   *June-August 2024*
- Developed interactive, web-based interfaces for LEGO Education, using PyScript, integrating Python with HTML, CSS, and JavaScript to enhance user experience and functionality
- Created lower-level communication protocols within a team of 15, ensuring seamless data exchange and synchronization between multiple devices on the LEGO SPIKE and Arduino Alvik platforms

Tufts University - IDEA Lab   **Medford, Massachusetts**
Undergraduate Researcher   *February-May 2024*
- 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 and the Dean of Engineering

Tufts Mexican Culture Club   **Medford, Massachusetts**
Executive Board Member & Treasurer   *September 2023-May 2024*
- Managed administrative and budget-related tasks while organizing events to promote Mexican culture and collaborated with the Consulate of Mexico in Boston to connect professors and students

PROJECTS

Image Compressor
- Implemented in C using discrete cosine transformation, quantization, and bit packing techniques

Universal Machine
- Created a Turing-complete virtual machine in C, achieving 12x processing speed increase after profiling

SKILLS

Programming Languages: C, C++, Java, Python, JavaScript, PyScript, HTML & CSS, SQL, MATLAB
Software: Microsoft Office 365, Latex, Onshape, LEGO Robotics, Arduino, GarageBand
Framework & Technologies: React, Git, GitHub
Languages: English, Spanish, French