JAVIER LAVEAGA AGUIRRE

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EDUCATION

Tufts University - School of Engineering   **Medford, Massachusetts**
Bachelor of Science in Computer Science, Minor in French   *May 2026*
- Achievements: GPA: 3.89/4.00, Dean's List 2022-2024
- Relevant Courses: Data Structures, Calculus III, Probability, Statistics, Discrete Math, Linear Algebra, Machine Structure and Assembly Language Programming, Algorithms, Software Engineering
- Tufts Summer Program in Talloires, France   *May-July 2023*

WORK EXPERIENCE

Tufts University - Center for Engineering Education and Outreach   **Medford, Massachusetts**
Software Developer Research Assistant   *Sep 2024 - Present*
- Fixed bugs and added new features to a course website using Python and JavaScript, improving functionality
- Built an interactive synthesizer using Arduino and LEGO Robotics, enabling undergraduates to effectively learn about sine waves and sound

Tufts JumboCode   **Medford, Massachusetts**
Software Developer   *Sep 2024 - Present*
- Partnered with a nonprofit to improve the management of educational resources for tutors serving adult immigrants in Greater Boston
- Designed and developed a streamlined library system using a Neon Database, React, and Clerk API for secure user authentication

Tufts University - Center for Engineering Education and Outreach   **Medford, Massachusetts**
Technology Development Intern   *Jun 2024 - Aug 2024*
- Developed interactive, web-based interfaces for LEGO Education using PyScript, integrating Python with HTML, CSS, and JavaScript to enhance user experience and improve 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   *Feb 2024 - May 2024*
- Developed a machine learning model using hyperspectral imaging to classify various types of plastic

Tufts University - School of Engineering   **Medford, Massachusetts**
Research Assistant   *Feb 2023 - Apr 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   *Sep 2023 - May 2024*
- Managed administrative and budget-related tasks and organized events to promote Mexican culture. Collaborated with the Consulate of Mexico in Boston to successfully 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: Spanish, English, French
Certifications: Social and Behavioral Research CITI Program, Google Web Development HTML & CSS