

# JAVIER LAVEAGA AGUIRRE

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## EDUCATION

<b>Tufts University - School of Engineering</b> <i>Bachelor of Science in Computer Science, Minor in French</i> Achievements: GPA: 3.86/4.00, 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, Machine Learning, Visual Analytics	<b>Medford, Massachusetts</b> May 2026
<b>Tufts in Talloires – France abroad program</b>	May-July 2023

## WORK EXPERIENCE

<b>Tufts University - Center for Engineering Education and Outreach</b> <i>Software Developer Research Assistant</i> <ul style="list-style-type: none"><li>Fixed bugs and added new features to a course website using Python and JavaScript, improving user experience and functionality</li><li>Built an interactive synthesizer using Arduino and LEGO Robotics, enabling undergraduates to effectively learn about sine waves and sound</li></ul>	<b>Medford, Massachusetts</b> Sep 2024 - Present
<i>Technology Development Intern</i> <ul style="list-style-type: none"><li>Developed interactive, web-based interfaces for LEGO Education using PyScript, integrating Python with HTML, CSS, and JavaScript to enhance user experience and improve functionality</li><li>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</li></ul>	Jun 2024 - Aug 2024
<b>Tufts JumboCode</b> <i>Software Developer</i> <ul style="list-style-type: none"><li>Partnered with a nonprofit to improve the management of educational resources for tutors serving adult immigrants in Greater Boston.</li><li>Designed and developed a streamlined library system, integrating a Neon database, React for UI and back-end functionality, and Clerk API for secure user authentication.</li></ul>	<b>Medford, Massachusetts</b> Sep 2024 - Present
<b>Tufts University - IDEA Lab</b> <i>Undergraduate Researcher</i> <ul style="list-style-type: none"><li>Developed a machine learning model using hyperspectral imaging to classify various types of plastic</li></ul>	<b>Medford, Massachusetts</b> Feb 2024 - May 2024
<b>Tufts University - School of Engineering</b> <i>Research Assistant</i> <ul style="list-style-type: none"><li>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</li></ul>	<b>Medford, Massachusetts</b> Feb 2023 - Apr 2023
<b>Tufts Mexican Culture Club</b> <i>Executive Board Member &amp; Treasurer</i> <ul style="list-style-type: none"><li>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</li></ul>	<b>Medford, Massachusetts</b> Sep 2023 - May 2024

## PROJECTS

**Command Line Interface (C++):** Implemented a CLI tool, allowing constant-time text queries on 205MB+ of data  
**Image Compressor:** Implemented in C using discrete cosine transformation, quantization, and bit packing techniques  
**Universal Machine:** Created a virtual machine in C, achieving 12x processing speed increase after

## SKILLS

**Programming Languages:** C, C++, Java, Python, JavaScript, PyScript, HTML & CSS, SQL, MATLAB  
**Software:** Microsoft Office 365, LaTeX, Tableau, Onshape, LEGO Robotics, Arduino, GarageBand  
**Framework & Technologies:** React, Node.js, Git, GitHub  
**Languages:** Spanish, English, French  
**Certifications:** Social and Behavioral Research CITI Program, Google Web Development HTML & CSS