

JAVIER LAVEAGA AGUIRRE

Medford, MA | +12027446032 | javier.la200426@gmail.com | www.linkedin.com/in/javier-laveaga-4220aa268/
github.com/javier-la200426 | javierlaveaga.netlify.app/

EDUCATION

Tufts University - School of Engineering <i>Bachelor of Science in Computer Science, Minor in French</i> 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 in Talloires – France abroad program	Medford, Massachusetts May 2026 May-July 2023
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WORK EXPERIENCE

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

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
Unit Testing Framework: Implemented a custom Java testing framework inspired by JUnit for improved test automation

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