Luke Fredericks

ARCHITECTURAL STUDIES & ENGINEERING

Boston, MA 02130
(617) 637-1521
luke.fredericks@tufts.edu
linkedin.com/in/luke-fredericks

Junior in Architectural Studies at Tufts School of Engineering, seeking a summer 2027 internship in architecture or structural engineering.

EDUCATION

Tufts University, School of Engineering, Medford, MA — Expected May 2028
B.S.E. in Architectural Studies · GPA 3.4
Coursework: Structural Analysis, Statics and Dynamics, Computer-Aided Design, Perspective Drawing, C++ Programming

Boston Latin School, Boston, MA — May 2024
High school diploma · GPA 4.2

ENGINEERING PROJECT

Basswood Bridge Competition, CEE 22 Structural Analysis — Fall 2026

- Designed, built and load-tested a twin triangular-truss bridge that carried 201 lb at 85 g, a load-to-weight ratio of 1,071, placing 3rd of 14 teams.
- Modeled all 55 members in SAP2000 under vertical, lateral and combined loads, and checked the results against a direct-stiffness solver I wrote.

DESIGN PORTFOLIO

Independent conceptual projects, unbuilt: each taken from hand sketches to a 3D model, drawing set and renderings.

Whale Bridge: a 941 ft pedestrian bridge across the Charles with a 95 ft lifting span. Rhino, Enscape

Aerie House: a four-level, 3,990 sq ft house built into a cliff. Revit, Enscape

Calla Lilies: a solar-powered bus stop in Jamaica Plain, sited with city data. Revit, Enscape

EXPERIENCE

Server, Back Deck, Boston, MA — Feb 2024 – Present

- Serve guests in a high-volume downtown restaurant, managing several tables at once under time pressure.

Graphic Design Intern, Tisch College of Civic Life, Tufts University — Jun 2023 – Aug 2023

- Designed promotional graphics and digital assets for campus events in Adobe Creative Suite, working with staff on outreach materials.

LEADERSHIP

Sports Executive Editor, The Tufts Daily

- Run the sports section: assign and edit every article and set coverage for the season.
- Train new writers in reporting and writing, and build connections across the sports journalism field.

Engineering Ambassador, Tufts School of Engineering

- Mentor first-year engineering students on choosing a major, planning courses and finding internships.

SKILLS

Design & BIM	Revit, Rhino, AutoCAD, Civil 3D, construction drawing sets
Visualization	Enscape rendering, hand sketching, perspective drawing
Analysis	SAP2000 structural modeling, GIS site data
Graphics	Photoshop, Illustrator, InDesign, Lightroom, Premiere Pro, Procreate
Programming	Python, C++, Java