

Gurjaap Bal

gurjaapbal1015@gmail.com | (530) 551-5644 | <https://www.linkedin.com/in/gurjaap> |
web.mit.edu/gurjaap/www

Eager Software Developer with the goal of gaining more experience to become a Software Engineer.

EMPLOYMENT

Orchard Machinery Corporation Intern

June 2022 - August 2022

- Extensive design experience on Solid Works creating machine components and fixtures
- Worked alone to solve real world issues like redesigning a bumper to allow for towing
- Teamed up with Mechanical Engineers in the industry to tackle large-scale problems such as modeling a conveyor belt assembly for a new machine

EDUCATION

Massachusetts Institute of Technology, Cambridge, MA

4.80 GPA

Bachelor's of Science in Computer Science and Engineering

May 2025

Minor in Mechanical Engineering

May 2025

Relevant Coursework

Design and Analysis of Algorithms, Computer Systems Engineering, Software Construction, Intro to Machine Learning, Fundamentals of Programming, Intro to Algorithms, Computation Structures, Low-Level Programming in C and Assembly, Mathematics for Computer Science

Technical Skills: Considerable experience with **Python, C, TypeScript, JavaScript, React, HTML, CSS, Git, Assembly**

PROJECTS

Photoshop Tool using TypeScript

- Developed a grammar and expression parser to read text inputs and edit an image
- Allowed for image resizing, overlaying images, adding text to an image, and gluing images together through Class implementations of an Expression Interface

Platformer Game backend with Python

- Represented player and objects as sprites with attributes such as position coordinates and velocity vectors
- Designed a collision detection algorithm using hitboxes on each sprite and translation vectors to correct collisions

Personal Website using the React framework

- Designed a React-based website using HTML for structure and CSS for styling
- Includes features such as a navigation bar and fully responsive design

Card Matching Game using TypeScript

- Implemented multiplayer feature by using concurrency through Promises
- Substantial work with abstract data types and keeping them safe from rep exposure