

Vedant Modi

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EDUCATION

Tufts University

BS Computer Science, BA Applied Mathematics, GPA 3.82

Aug. 2022 – May 2026

Somerville, MA

Relevant Coursework

- Machine structure and Assembly programming
- Data structures and algorithms
- Mathematical proofs
- Artificial intelligence
- Linear algebra

Carnegie Vanguard High School

GPA 4.70 / 4.00

Aug. 2018 – May 2022

Houston, TX

Significant Activities: International Thespian Society, National Honor Society, Interact

EXPERIENCE

Developer

Tufts Jumbocode

September 2023 – Present

Somerville, MA

- Developing an app benefiting the Emerald Necklace Conservancy educating visitors on preservation.
- Developing a full-stack web application using React, MongoDB, Bun.
- Practicing team-based coding powered by Git and GitHub collaboration tools.

Course Assistant for Data Structures

Tufts University, Department of Computer Science

May 2023 – Present

Somerville, MA

- Hosting office hours aiding students in course projects and lecture topics.
- Grading student assignments by studying submissions for functionality, testing, and course coding standards.
- Contributing to a program that organizes course grading. Built as a Python CLI mimicking a SQL database.

Receptionist

Tufts University, Office of Academic Space Management

May 2023 – Present

Somerville, MA

- Helping guests, students, and faculty
- Organizing mail, analyzing building usage, inspecting building infrastructure

Visual Communications Intern

Texas Heart Institute

May 2021 – Aug. 2021

Houston, TX

- Designed graphics representing cardiological research for publicity
- Created animations and maintained organization's website
- Interviewed for animation work by the *Houston Chronicle*

SIGNIFICANT PROJECTS

World Clock | JavaScript, HTML, CSS

Aug. 2023

- Web application that shows the time of chosen cities, with a helpful interactive map to aid in visualization
- Published application to personal website with custom autocomplete search bar
- Used Maptiler and OpenStreetMap for mapping, Figma to model UI, and Git to track progress

JetLag | Python

Mar. 2023 – Present

- Application guiding the user through sleep changes when transitioning between timezones during air travel, given flight details (e.g. airports, departure and arrival times)
- Calculations were informed by research in circadian rhythm
- Used Python `tz` library in conjunction with database of IATA-recognised airports to parse user input for calculations

IATA Guesser <i>JavaScript, HTML, CSS</i>	Jul. 2023
<ul style="list-style-type: none"> • Memory game generating random IATA airport codes for the user to recall • Used Toastr for popups reflecting answer and created a custom autocomplete search box 	
IATA Country Sorter <i>Python</i>	Jul. 2023
<ul style="list-style-type: none"> • Script that maps inputted IATA airport codes into an output file for their country • Used to find flights for any airport in country on ITA Matrix 	
gerp <i>C++, Makefile, Bash</i>	Apr. 2023 – May 2023
<ul style="list-style-type: none"> • Program that searches for user-queried text from specified directory • Built around dictionary ADT, where dictionary stores words and filepath • Built with partner powered by Git content management 	
zap <i>C++, Makefile, Bash</i>	Apr. 2023
<ul style="list-style-type: none"> • Compressor/decompressor for text files utilising Huffman coding process • Practiced using priority queue ADT and recursion in C++ 	

TECHNICAL SKILLS

Programming Languages: C/C++, Python, JavaScript, TypeScript, HTML/CSS, R, SQL, LaTeX

Frameworks and Environments: React, React Native, Node.js, MongoDB, Bun

Developer Tools: Visual Studio Code, Git, GitHub, Makefile, Figma, Unix, Bash, SFTP, SSH, AutoHotkey (Windows)

APIs and Libraries: LeafletJS, OpenStreetMap, Maptiler, Maplibre, Mapbox, ArcGIS, OpenSkyNetwork, pandas

Media: Droneography, Photoshop, Lightroom, After Effects, Davinci Resolve Studio, Premiere Pro, InDesign, Wordpress

Spoken Languages: Proficiency in English, Hindi, Spanish, and French

Woodworking: Proficiency in power tooling like sawing (miter, table, band) and drilling