Vedant Modi

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Education

Tufts University Aug. 2022 – May 2026
GPA 3.82, BS Computer Science, BA Applied Mathematics *Somerville, MA*
Relevant Coursework: Machine structure and Assembly programming, Data structures and algorithms Mathematical proofs, Linear algebra

Experience

Tufts JumboCode September 2023 – Present
Developer *Somerville, MA*
- Develop an app benefiting the Emerald Necklace Conservancy educating visitors on preservation
- Design a full-stack web application using React, MongoDB, Bun
- Practice team-based coding powered by Git and GitHub collaboration tools

Tufts University, Department of Computer Science May 2023 – Present
Course Assistant for Data Structures and Algorithms *Somerville, MA*
- Host office hours aiding students in course projects and lecture topics
- Grade student assignments by studying submissions for functionality, testing, and course coding standards
- Contribute to a program that organizes course grading built as a Python CLI mimicking a SQL database

Tufts University, Office of Academic Space Management May 2023 – Present
Receptionist *Somerville, MA*
- Service community via organizing mail, and analyzing building usage for largest academic buildings on campus

Relevant Projects

JetLag | *Python* Mar. 2023 – Present
- Construct a tool to aid sleeptime changes when traveling between timezones during air travel, given flight details (e.g. airports, departure and arrival times)
- Craft using Python `tz` library and database of IATA-recognised airports to parse user input to calculations

arith | *C, Makefile, Bash* Oct. 2023
- Wrote a low-level, multi-phase JPEG-style compressor/decompressor with a partner
- Learned how to perform floating point arithmetic and pack/unpack binary data modularly

vfl | *C, Makefile, Bash* Oct. 2023
- Authored a program that reads/writes binary files representing flight itineraries
- Practiced optimizing file size by considering how many bits needed for each itinerary detail

gerp | *C++, Makefile, Bash* Apr. 2023 – May 2023
- Built a program with partner that searches for user-queried text from specified directory
- Designed with dictionary ADT, where dictionary stores words and filepath, and collaborated via Git

zap | *C++, Makefile, Bash* Apr. 2023
- Wrote a Huffman compressor/decompressor for text files and practiced using priority queue ADT and recursion

Skills and Interests

Programming Languages: C/C++, Python, Assembly, JavaScript, TypeScript, HTML/CSS, R, SQL, LaTeX
Frameworks and Environments: React, React Native, Node.js, MongoDB, Bun
Technical Topics: Machine arithmetic, memory architecture, performance analytics, data structures and algorithms, compilers, object-oriented programming
Developer Tools: Visual Studio Code, Git, GitHub, GCC, Makefile, Figma, Linux/Unix, Bash, SSH, AutoHotkey
APIs and Libraries: LeafletJS, OpenStreetMap, Maptiler, Maplibre, Mapbox, ArcGIS, OpenSkyNetwork, pandas, tz
Media: Droneography, Photoshop, Lightroom, After Effects, Davinci Resolve Studio, Premiere Pro, InDesign, Wordpress
Spoken Languages: Proficiency in English, Hindi, Spanish, and French
Travel: Hiking mountains, traveling to novel destinations, searching for amazing flight deals
Standards: Expert in recalling IATA airport codes, ISO country codes, and timezones
Woodworking: Prowess using power tools like a saw (miter, table, band) and drill