

Vaishnavi Gupta

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[personal website](#) | [github](#) | [linkedin](#)

EDUCATION

Cornell University

BS (Computer Science)

August 2019 - May 2023

GPA - 3.960

ORGANIZATIONS

Women In Computing at Cornell

The Hortus Forum (Horticulture Club)

COURSEWORK

Honors OOP & Data Structures

Functional Programming

Honors Discrete Mathematics

Intro to Machine Learning

Visual Imaging

Multivariable Calculus

Differential Equations

SKILLS AND TECHNOLOGIES

Software Design + Data Science

Significant experience in **Java**, **Python** (including PyTorch and scikit), **C++**, **OCaml** and **Kotlin** through class and personal projects

Web Development

Frontend and backend experience using **Javascript (React, Node.js)**, **HTML5**, **CSS**, **PHP** & **MySQL**

Graphic Design

Adobe Illustrator and **InDesign**

AWARDS

Dean's List: All semesters offered

ACM-ICPC for Schools Contest:

2nd place in the India ICPC qualifiers amongst 100 high school teams

3-time Indian National Olympiad in Informatics Finalist: Amongst the top 60 students in the country

AIME qualifier

EXPERIENCE

Cornell University — Teaching Assistant

August 2020 - present

I hold weekly office hours and grade problem sets and exams as a TA for **CS 2802 - Discrete Math Honors**

Buckler Lab, Cornell University — Researcher

June 2020 - present

Working on writing a set of lightning fast genetic analysis tools and adding further bioinformatics support for Kotlin.

All India Institute of Medical Sciences, Delhi, India — Developer and intern

January 2018 - July 2019

Built an [online learning platform](#) from scratch to train medical students and doctors on optimal neonatal care practices; PHP and MySQL used for backend

Scaled up nationwide, with **10,000+ users** from India and the Maldives

Institute of Genomics and Integrative Biology, Delhi, India — Research intern

March 2018 - June 2018

Implemented machine learning models using various classifiers (Naive Bayes, Random Forest) to predict the chemical reactivity of untested molecules for tuberculosis drug discovery programmes

PROJECTS

Phylo - [Demo](#) | [Github](#)

A phylogenetic tree library in **OCaml** to parse DNA sequence files and generate most-likely phylogenetic trees using various distance-measure and Bayesian inference MCMC sampling based algorithms. Also implemented an XML lexer and parser to read in existing tree data. Demoed via a clean **React** frontend.

Crunch - [Github](#)

A fast command line tool written in **C++** implementing various lossless file compression algorithms like LZW and Huffman Coding.

Critterworld

A 10,000 line+ **Java** game consisting of a world of programmable 'critters'. In the process, I wrote a server and implemented thread-safety to support concurrent API calls from multiple players, and wrote a parser to read in critter instruction files.