

Uma (Deepa) Pulugurtha [847-530-8388] [udp3@cornell.edu]

Senior at Cornell pursuing Computer Science with a strong interest in algorithms and math. Experienced in full stack development, focusing on building efficient solutions.

EDUCATION

CORNELL UNIVERSITY

Bachelor of Science in Computer Science, Minor in Applied Mathematics
Honors/Other: Eng. Dean's List, WICC Tech Committee, PE 1640 Instructor

Ithaca, NY

May 2026

PROFESSIONAL EXPERIENCE

MATHWORKS,

Engineering Development Group

Natick, MA

May 2025–August 2025

- Identified edge cases and flaws in the existing diff system through systematic testing
- Benchmarked third-party libraries and internal tooling, presenting trade-offs and implementation recommendations to stakeholders
- Prototyped alternative HTML diffing solutions for **MATLAB** .m files using **Ruby**, **C++**, **Python**, and **MATLAB**
- Created a tool to evaluate diff correctness using randomized input generation and automated output analysis

CORNELL UNIVERSITY,

CS 3110, CS 4820 Teaching Assistant

Ithaca, NY

Jan-May 2025, Aug-Dec 2025

- Led weekly discussion sections, office hours for students in **Functional Programming and Data Structures** and **Introduction to Analysis of Algorithms**
- Graded assignments and exams, offered feedback to hundreds of students
- Supported students with **OCaml**, writing proofs, conceptual reviews of algorithms, and exam prep

SBB RESEARCH GROUP,

Software Engineer Intern

Northbrook, IL

May 2024–August 2024

- Created three admin side web pages using **React** which supported email template creation, sending emails to restricted contacts, and viewing past data for sent emails
- Managed client and company data via **Apache** server and **SQL** database and created easy access to data in admin pages, created **API** used for my pages and my colleagues pages
- Leveraged libraries to improve site features such as **Quill** Editor and **Bootstrap** for styling
- **Collaborated** with Accounting, Information, and Engineering teams in weekly meetings to improve and combine final products

NOTABLE PROJECTS

MAIL OPTIMIZATION

- Utilized **M/M/N** and queueing theory to develop a simulation
- Communicated research findings to mailroom management to reduce wait times

Cornell ORIE Research

February 2023

EVENTERY MOBILE APP

- Developed an iOS app using **SwiftUI**, earning recognition as Best Overall at the Cornell App Development Hack Challenge. <https://www.youtube.com/watch?v=0j2arZBJBic>
- Achieved the top award out of 28 competing teams.

CU App Dev Hackathon

April 2023

BIG RED BLOCKCHAIN

- Developed a blockchain using **OCaml** for CS 3110 Final Project
- Implemented mining, wallets, transactions, and terminal user interface

Functional Languages

November 2023

ADDITIONAL SKILLS + AWARDS

- Proficient in MS Office, GSuite, Linux, MacOS; Fluent in English, Spanish, and Telugu
- Experience with Java, C, C++, Ruby, MATLAB, OCaml, React, JavaScript, HTML+CSS, Python, R, Harmony
- Illinois State Scholar 2021, AP Scholar w/ Distinction, National Merit Commended Scholar, National Spanish Exam Silver Medalist L5, National Honor Society, Various Model United Nations and Debate Awards