

# Justine Prasad

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## Education

**Hofstra University** - Expected Dec. 2025

*Bachelor of Science in Computer Science & Mathematics*

**GPA: 3.76/4.00**

*Hempstead, NY*

**Classes:** Data Structures & Algorithms, Operating Systems, Database Management, Assembly Programming, Linear Algebra, Calculus I-III, Discrete Structures I-II, Physics I-II

## Work Experience

**Software Engineer Intern**

**Jan 2024 – Present**

*Optimum*

*Bethpage, NY*

- Develop a **Python library** for Optimum's Stream Box using **Tesseract OCR** and **TigerVNC** on **Linux Fedora**, automating regression testing on **20+ devices** across **3+ teams**
- Implemented a scheduler** with ADB commands, prioritizing urgent HLR test cases and achieving **100% coverage** by storing SQLite databases and log files in MySQL for analysis and retrieval

**Undergraduate Student Researcher**

**June 2023 – August 2023**

*Hofstra Advanced Summer Program in Research*

*Hempstead, NY*

- Developed and optimized a two-layer Graph Convolutional Network (GCN) model** for node classification using PyTorch, achieving an accuracy of **81%** in categorizing over **2700 publications** from the Cora Dataset
- Researched and implemented Hugging Face's encoder-decoder models, analyzing suboptimal accuracy issues; **presented findings** and potential improvements at a Hofstra university symposium, titled '**Large Language Models with Graph Neural Networks for Legal Document Classification**'

**Information Technology Support Technician**

**Nov 2021 – Oct 2023**

*Hofstra Law University*

*Hempstead, NY*

- Provided real-time troubleshooting** and guidance for **50 weekly class sessions**, reducing technology-related disruptions, and managed the setup of video and audio recording for faculty events and interviews
- Prioritized and resolved weekly support requests from Hofstra Law School and Clinic with an average response time of **less than 30 minutes**, including imaging computer hardware, configuring I/O devices, and setting up classroom TVs and audio equipment

**Computer Science Tutor**

**Nov 2022 – April 2023**

*theCoderSchool*

*Roslyn, NY*

- Delivered personalized instruction** in Scratch and Python to **4 students**, guiding them through weekly projects with custom lesson plans tailored to individual learning styles
- Led a **5-person Scratch programming class**, enhancing hands-on, interactive learning through **real-time coding**, which increased student engagement and improved problem-solving skills

## Leadership Experience

**Founding Vice President**

**Oct 2023 – Jan 2024**

*Hofstra C.O.D.E*

*Hempstead, NY*

- Established Hofstra University's only active general computing club with the Computer Science Department, now boasting **50 members** and hosting a range of computer science workshops, from career networking to projects.

## Projects

**Optimum Winter 2024 A.I. Hackathon Project** | *Python, Vertex AI, Google Chirp TTS/STT*

**January 2024**

- Achieved **3rd place** in a **48-hour hackathon** by developing an **image classification system** for gateway status monitoring and collaborating with team members to integrate various components, ensuring a seamless and efficient development process
- Leveraged **Vertex AI** for model training, which resulted in a **95.5% precision rate**, and deployed an API endpoint to facilitate frontend connectivity, integrating Google Chirp TTS/STT functionality to enhance user interaction

**Multimedia Retrieval Project** | *Python, LangChain, OpenAI API*

**November 2023**

- Used Python, LLMs, and ML to extract embeddings from **100MB+ multimedia files** (Video, Documents) in **<10 seconds** and created a GPT use case with a pipeline using retrieval augmented generation

**Portfolio Website** | *HTML, CSS, JavaScript, React, Netlify*

**September 2023**

- Utilized **React** and **JavaScript** to develop a dynamic, interactive portfolio website, showcasing key projects and skills
- Automated website deployment through Netlify using **Git** for version control, and enhanced usability with a modern, responsive design employing **Material-UI, HTML, and JavaScript**

## Technical Skills

**Languages:** Python, C/C++, JavaScript, HTML/CSS

**Developer Tools:** React, Node.js, Material-UI, Microsoft Azure, Pandas, Git, VS Code, Linux Fedora, SQL (Postgres), Bash

**Awards:** Hofstra Presidential Scholarship, Dean's List