

Om Amit Gandhi, Ph.D.

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SUMMARY

I am a passionate Ph.D. student in computer science, excited to contribute to the world of blockchain and cryptocurrencies. Looking forward to have research papers and publications in the field of distributed systems and blockchain.

EDUCATION

2025 - present	Ph.D. in Computer Science at Illinois institute of Technology	(GPA: 3.9/4.0)
2024 - 2025	Masters in Computer Science at Illinois institute of Technology	(GPA: 3.9/4.0)
2019 - 2023	Bachelors at Sardar Vallabhbhai Patel Institute of Technology	(GPA: 3.6/4.0)

WORK EXPERIENCE

Research Assistant - Illinois Institute of Technology Aug 2025 - present

- Working on a research project with focus in blockchain sharding and distributed systems.
- Trying to optimize the current blockchain systems with sharding.
- Also working on collaborating with others to have a full fledge blockchain system of our own.

Teaching Assistant - Illinois Institute of Technology Aug 2025 - present

- Serving as a Teaching assistant for CS 458, Introduction to Information Security.
- Helping students with their assignments and their doubts in order to help them grow.
- Grading assignments and exams for the students.

Freelance Security Researcher Aug 2023 - present

- Reported security vulnerabilities to bugcrowd, hackerone, and so many other websites.
- Discovered a cross-site scripting bug in a website that was acknowledged as a duplicate.
- Reported security vulnerabilities in meta with some of them marked as duplicate.
- Engaged in web application penetration testing and responsible disclosure reports.

Junior Web Developer - Minimal Dot Feb 2023 - Jul 2023

- Developed several functionalities as per client requirements with Angular as the tech stack.
- Performed tasks to learn various frameworks such as Angular, react, ionic, flutter and so on.
- Reported security vulnerabilities in meta with some of them marked as duplicate.

Web Development Intern - TatvaSoft Jun 2022 - Jul 2022

- Developed an E-commerce bookstore website which was a team project.
- Developed the front-end such that the users with various roles can access the services according to their authorization in the bookstore application.
- Learned basics of developing a website using typescript, PostgreSql and .NET.
- Introduced proposals to the supervisors to improve the training process.

SKILLS

Technology Python, C, C++, Angular, React, Flutter, NodeJS

Other Latex, Overleaf, MS office Suite, Google suite, VS code, vim, Linux

Languages English, Gujarati, Hindi

UPCOMING PUBLICATIONS

Blockchain Sharding Simulations

Dec 2025

- Trying to simulate the blockchain sharding in order to have better performance than the normal blockchain.
- Looking to write a paper and publish by the end of 2025, most probably in MASCOTS

VOLUNTEER EXPERIENCE

Volunteer - eScience 2025

Sept 2025

- Served as a volunteer in the eScience conference 2025 that was held in Chicago.
- Helped with the AV support for the conference.

RESEARCH PROJECTS

Privacy-preserving Financial computation using Homomorphic Encryption

Nov 2024

- Using homomorphic encryption, I created a system that does financial computations on encrypted data directly, including simple interest and loan approval process.
- I created a full stack website with python flask as the backend and React framework as the frontend.
- Using concrete-ML library I implemented privacy-preserving machine learning to compare the results on data without any encryption.

Machine Learning Model

Apr 2024

- To learn about the different machine learning models.
- To develop a machine learning algorithm that helps to identify a positive and a negative sentence.
- Provided some methods to clean and cleanse the data that should be used for training the model.
- Tested on real time by having user inputs as sentences.

PROJECTS

Personal Portfolio

Jul 2024

- To learn about 3D web development and WebAR.
- Provided some cool animations to the model to make it look realistic on web
- Designed an entire 3D website and gave it animations on scroll.

Plane 3D animations

Jul 2023

- To learn about 3D web development and WebAR.
- Provided on scroll animation such that would look like a moving plane.
- Designed an entire 3D website and gave it animations on scroll.
- Used youtube tutorials to learn about webAR and react three fiber and three js to build a 3D website.

NLP Tokenization for Healthcare Data

Apr 2025

- Designed an NLP based website that tells patients about their potential diseases based on the symptoms on the patient notes.
- Learned about how to use ChatGPT's API to call the response from GPT 4.
- Designed a cool looking front-end for the website where patient can easily understand about their symptoms.

PROFESSIONAL MEMBERSHIPS

Member, Upsilon Pi Epsilon Honor Society (UPE)

2025 - present

- In the honor of my outstanding academic performance during my graduate studies in computer science, I was admitted into Upsilon Pi Epsilon (UPE).
- My 3.9 GPA at Illinois Institute of Technology and my work in research field including Distributed systems, blockchain, Artificial intelligence and homomorphic encryption were taken into consideration when I was granted the membership.
- Looking forward to connect with individuals that share my enthusiasm for advancing the research area of blockchain has been made possible by this membership.