AYUSH BHARDWAJ

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EDUCATION

Chicago, Illinois

University of Illinois Chicago **Expected: December 2025**

Major: Bachelor of Science in Computer Science **GPA: 3.81/4.0**

Positions & Awards: Winner of Sparkhacks 2024, CS Ambassador 2024, Orientation Leader 2023

Coursework: Systems Programming, Data Structures and Algorithms, Computer Algorithms, Programming Language Design & Implementation, Software Design, Artificial Intelligence, Machine Learning and Database Management Systems.

SKILLS

Programming Languages: Python(PyTorch), HTML, CSS, Javascript, Java, R, C++, C, SQL, F#, and Golang

Software/Frameworks: React, Node.js, Docker, Google Cloud Platform, Android Studio, Git and PostgreSQL(pgvector).

WORK EXPERIENCE

Head of Teaching Assistant (Data Structures and Algorithms) **January 2023 – Present**

College of Engineering at UIC

- Led office hours, mentoring and debugging code for 500+ students on complex projects like graphs, linked lists, and trees, consistently boosting project completion rates by 25% over 5 consecutive semesters.
- Administered and graded labs, exams, and mock interviews, boosting students' understanding of key topics including time complexity, hash tables, and algorithmic optimization, leading to a 30% improvement in exam scores.
- Mentored students with Optiver, Motorola, and Allstate on 200+ projects, guiding them from development to debugging.

Senior Website Administrator **July 2023 – Present**

Engineering Administration at UIC

- Created and managed UIC's engineering websites with 300+ subpages using WordPress, HTML, and CSS, collaborating with the Marketing team to update content, fix dead links, and handle data manipulation.
- Implemented Google Analytics 4 with Tag Manager, optimizing data analysis and boosting website traffic by 50%.

Website Developer **August 2022 – May 2023**

Education Department at UIC

- Managed full-stack tasks, uniting design, WordPress customization, and HTML/CSS back-end development to create a WordPress e-portfolio for recruiting graduated students as instructors.
- Incorporated ideas and feedback from a team of 4 psychology professors to ensure e--portfolio met all the requirements.

Computer Specialist II **November 2022 – May 2023**

Richard J. Daley Library

- Dealt with complex technical complications ranging from PC and MAC troubleshooting, software, hardware, networks, internet access and operating systems to 500+ computers and laptops.
- Configured UIC domain laptops, iPads, and other equipment with specialized software and tools for 200+ staff.

Orientation Leader **May 2023 – January 2024**

Department of New Student and Family Program at UIC

- Facilitated group sessions, assisted advisors, managed course registrations, and delivered speeches, demonstrating adaptability while often working over 15+ hours a day.
- Managed check-in for 4000+ students, leading to a 10% boost in new student engagement, belonging, and informed academic decision-making via small group interactions.

PROJECTS

Super Health App: Received 1st price for UIC SparkHacks **February 2024**

- Developed Super Health App, a multifunctional health management platform, integrating telemedicine consultations, prescription management, reminders, and a mindful space, using Python and Tkinter.
- Overcame challenges such as SQL database integration, user input handling, and game integration, while achieving a working prototype within the SparkHacks-2024 hackathon timeframe, showcasing adaptability and technical proficiency.

ChatNexus: Large Language Model using PyTorch **July 2024**

- Developed a GPT-based Language Model using PyTorch, leveraging multi-head self-attention mechanisms and transformer blocks to enhance text generation capabilities, optimizing model performance on both CPU and GPU.
- Implemented a data processing pipeline using Python, and Pickle for efficient handling of large text datasets, incorporating techniques like token embedding and positional encoding.

VectorDriveAI: PyTorch and PostgreSQL **May 2024**

- Developed a secure data classification system using GPT-based models and PGVectorStore, integrating Google Drive with options for OpenAI API or Ollama for sensitive data detection and classification.
- Implemented a scalable vector search solution with PostgreSQL pgvector, supporting both OpenAI and Ollama embeddings, for efficient document retrieval and real-time sensitivity scoring.