

DHRUV AGARWAL

Chicago, IL 60612

☎ 312-619-7812 ✉ dagarw7@uic.edu 🔗 [linkedin.com/in/dhruvagarwal0](https://www.linkedin.com/in/dhruvagarwal0)

EDUCATION

University of Illinois Chicago

Chicago, Illinois

Master of Science in Computer Science; GPA: 3.77/4.0

May 2024

- **Coursework:** Distributed Systems, Object-Oriented Languages, Query Processing in Database Systems, Neural Networks

Vellore Institute of Technology

Vellore, India

Bachelor of Technology in Computer Science; CGPA: 3.6/4.0

June 2021

- **Coursework:** Software Engineering, Data Structure and Algorithms, Operating Systems, Computer Networks
- **Electives:** Business Analytics, Lean Startup Management, Statistical Analytics for Business Research, Marketing Management

TECHNICAL SKILLS

Languages: Python, C++, JavaScript, TypeScript, C#, SQL, Scala, Ruby

Web Technologies & Frameworks: React, Next.js, Node.js, Django, Tailwind, HTML/CSS, Socket.IO, WebRTC

Databases: MongoDB, PostgreSQL, MySQL, Firebase, Apache Cassandra, Elasticsearch, Redis

Tools & Platforms: Git, AWS, Kubernetes, Docker, Kafka, GCP, Azure, GraphQL, REST APIs

EXPERIENCE

UIC Business

Chicago, Illinois

Technology Associate

June 2024 – Present

- Engineered custom third-party Zoom Rooms Controllers using C++ SDK, improving video conferencing setup time by 50%.
- Implemented low-level APIs to establish bi-directional communication between custom applications and Zoom Rooms, achieving 95% feature parity with first-party controllers.

Graduate Assistant

Jan 2023 – May 2024

- Spearheaded automation projects using MS PowerApps and Power Automate, reducing on-boarding time by 75%.

Competent Electric Company

Kota, India

Software Engineer

June 2021 – July 2022

- Developed and maintained full-stack systems for sales and inventory management using C++ and Boost libraries.
- Optimized data retrieval systems using SQL databases, improving query performance by 40%.
- Implemented automated testing with Google Test framework and CI/CD pipelines using Jenkins and Docker.

YA Ventures

Delhi, India

Software Engineering Intern

May 2020 – July 2020

- Spearheaded chatbot integration on company homepage, reducing customer response time by 40% using DialogFlow and Firebase.
- Optimized chatbot training process, resulting in a 25% increase in user engagement and successful query resolution.

PROJECTS

Distributed Systems Simulator | Scala, Akka, Distributed Systems

- Architected a scalable simulator for distributed algorithms including Snapshot, Wave, and Election, using Scala and Akka.
- Leveraged Akka's Actor model for concurrent computation, improving system performance.
- Developed a menu-driven program to execute 8 distributed algorithms on various network topologies.

Co-Edit | TypeScript, React, Tailwind, Node.js, PostgreSQL, Docker

- Built a real-time collaborative document editing tool, supporting simultaneous editing by up to 10 users.
- Engineered user authentication and version control system using Node.js and PostgreSQL.
- Containerized the application with Docker, ensuring consistent deployment across environments.

Assembly Language Interpreter | C++11

- Developed an interpreter for Simple Assembly Language (SAL), implementing a virtual machine with 32-bit word-addressable memory.
- Designed and implemented core components including accumulator register, program counter, and special-purpose bits.

Pacman | Unity, C#

- Recreated the classic Pacman game with modern graphics and additional features using Unity and C#.
- Implemented AI-driven ghost behavior and designed multiple levels with increasing difficulty.

EXTRACURRICULAR

- **Published** – “Posture And Activity Analysis For Patients In Rehabilitation” in *International Journal of Scientific & Technology Research*, Volume 9, Issue 10, October 2020. ISSN 2277-8616.
- **Leadership** – AIESEC VIT Team Lead for Outgoing Global Volunteers and Outgoing Global Entrepreneurs department.
- **Volunteer** – Academic Support Volunteer with Becoming I foundation and National Service Scheme in local schools for underprivileged children.