

DHRUV AGARWAL

Chicago, IL 60612

☎ +1 (312) 619-7812 ✉ dagarw7@uic.edu 🔗 linkedin.com/in/dhruvagarwal0 🌐 dhruvagarwal.me

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; GPA: 8.6/10.0

June 2021

- **Coursework:** Software Engineering, Data Structures and Algorithms, Operating Systems, Network and Communication
- **Electives:** Business Analytics, Lean Startup Management, Statistical Analytics for Business Research, Marketing Management

TECHNICAL SKILLS

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

Web Technologies & Frameworks: React, Next.js, Node.js, Django, Flask, HTML, CSS, Tailwind CSS

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

Tools & Platforms: Docker, Kubernetes, Kafka, Git, AWS, GCP, Azure, Postman, Jenkins, CI/CD, 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 a full-stack sales and inventory management system, leveraging Java Spring Boot for the backend, Hibernate for ORM, and Thymeleaf for the frontend, ensuring seamless integration and efficient data handling.
- Optimized data retrieval processes by refactoring complex SQL queries in MySQL, achieving a 40% improvement in query performance and reducing database load.
- Implemented automated testing frameworks using JUnit, enhancing code reliability and coverage. Integrated the testing suite with Jenkins for continuous integration and delivery, enabling streamlined deployment through Docker containers.

YA Ventures

Delhi, India

Software Engineering Intern

May 2020 – July 2020

- Innovated and deployed a chatbot interface for the company's landing page, utilizing BERT-based NLP Deep Learning models to achieve a 95% quicker responses to customer queries.
- Developed the backend using Flask REST APIs, Microsoft Azure, and CosmosDB (NoSQL), managing over 2 million records.

PROJECTS

SketchSync | *TypeScript, React, Next.js, Tailwind CSS, Node.js, Socket.IO* | [🔗 Link](#)

- Built a real-time collaborative digital whiteboard, 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.

Distributed Systems Simulator | *Scala, Akka, ScalaTest* | [🔗 Link](#)

- 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.

Assembly Language Interpreter | *C++11* | [🔗 Link](#)

- 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#* | [🔗 Link](#)

- 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.