

Ridha Chowdhury

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EXPERIENCE

CLARKE ASSOCIATES (React, TS, .NET Core, C#)

Software Engineer | 10/23 - 04/23 | Lancaster, PA

- Will be doing fullstack web development with React and ASP.NET Core.

ROCKWELL AUTOMATION (Java, Python, JS, SQL, OpenAI)

Software Engineering Intern | 05/23 - 08/23 | Milwaukee, WI | Fortune 500

- Developed Java Web services using Jersey & Hibernate, integrating SQL procedures & CI/CD.
- Enhanced LLM responses by integrating LangChain framework into FastAPI backend.
- Engineered a prompt recommendation system utilizing text embeddings, providing higher quality responses.
- Communicated project development to the executives.

THE CODER SCHOOL (C#, Python, TS, React)

Software Engineering Instructor | 02/20 - 08/23 | Ashburn, VA

- Designed project-based curricula & camps in Python, Java, & Scratch for K-12 students.
- Guided students through diverse projects involving industry tools such as React, TensorFlow, & Unity.

ALTRUTECH (C#, Unity3D, .NET Core)

Software Engineering Intern | 06/20 - 08/20 | Cleveland, OH

- Developed 4 VR environments using C# & Unity3D.
- Migrated render pipelines achieving 30% frame rate boost.
- Refactored with Unity Events for scalability & dx.

FIRST(FLL & FTC) (Java, Android Studio, Solidworks, Git)

Software Team Lead | 08/2014-06/2021 | Ashburn, VA

BRIAR WOODS HIGH SCHOOL (Java, Swing, JUnit)

Computer Science Teaching Assistant | 08/2019-06/2020 | Ashburn, VA

PROJECTS

LEETCOPILOT (Python, FastAPI, TS, React, PostgreSQL)

- Led a 5-member team in creating "LeetCopilot", a Chrome extension for LLM-driven LeetCode hints.
- Developed a FastAPI backend integrated with LangChain for enhanced hint accuracy via Google Search API.
- Designed an adaptive hint system, storing previous hints and code embeddings in an SQL database, to maximize hint reuse and minimize LLM text-generation.

PLANTOAI (React Native, TS, .NET Core, C#, SQL, TensorFlow)

- Developed a React Native app for autonomous plant care.
- Built an ASP.NET C# backend; integrated TensorFlow for plant care automation.
- Programmed an Arduino smart pot using C++ for automated tasks.

LATELIMITATOR (Python, Selenium, Tkinter, Docker)

- Developed an online class joining tool via web automation.
- Dockerized the application for easy setup.

EDUCATION

PENN STATE UNIVERSITY (3.44/4.0)

University Park | 08/21 - 05/25 (Expected)

BS in Computer Science | Minor in Statistics

Deans List Fall 22 & Spring 23

Extracurriculars:

- Coding, IEEE, & Math Club member
- Volunteer tech educator at public library
- ACM-IEEE Hackathon Finalist

BRIAR WOODS HIGH SCHOOL + ACADEMY OF ENGINEERING & TECHNOLOGY (DUAL ENROLLED)

Ashburn, VA | 08/2016 - 05/2021

Extracurriculars:

- TA for AP Computer Science
- Treasurer of MUN
- FIRST (FTC Teams 9901 & 14399)

SKILLS

LANGUAGES

Proficient:

• Python • JS/TS • C# • Java • SQL

FRAMEWORKS & LIBRARIES

• ReactJS • .NET Core • FastAPI • OpenAI
• Unity3D • Selenium

DEVELOPER TOOLS & PRACTICES

• Git, GitHub, Azure DevOps, & GitLab
• Linux, Docker, & Kubernetes
• MongoDB, PostgreSQL, SQLite
• AGILE & SCRUM

COURSEWORK

COMPUTER SCIENCE:

• OOP • Data Structures and Algorithms
• Digital Systems • Comp. Org. & Design
• Intro to Sys. Programming
• Programming Language Concepts

MATH & PHYSICS

• Discrete Math • Calc. I, II, & III • Linear Algebra
• Probability • Physics I & II

ONLINE

• Docker & Kubernetes: The Practical Guide
• Machine Learning with Python & Tensorflow

AWARDS

2 x Nationals FTC

2 x FTC Dean's List Finalist

1 x State Champions FLL