

Ridha Chowdhury

Ashburn, VA, USA | 1-571-375-9501 | chowdhuryridha@gmail.com
<https://ridha-chowdhury.netlify.app/> | [linkedin/Ridha-Chowdhury](https://www.linkedin.com/in/Ridha-Chowdhury) | [github/RidhaChowdhury](https://github.com/RidhaChowdhury)

EDUCATION

THE PENNSYLVANIA STATE UNIVERSITY

B.S. COMPUTER SCIENCE | GPA: 3.31/4.00

University Park, PA | Aug 2021 - May 2025

WORK EXPERIENCE

ROCKWELL AUTOMATION

PART-TIME SOFTWARE ENGINEER | MILWAUKEE, WI | AUG 2024 - TBD

- Contributing to a publication on a novel ML solution, focusing on classification benchmarking, feature extraction, and integrating Seaborn visualizations into LaTeX documents.
- Optimizing MagneMotion for low latency response by migrating from a relational to a time-series database.

SOFTWARE ENGINEERING INTERN | MILWAUKEE, WI | MAY 2024-AUG 2024

- Benchmarked AI classifiers, achieving 100% accuracy with KNN across 75 classes and integrated the solution into a dockerized microservice backend.
- Pioneered on-edge Graph RAG LLMs for a technician AI chatbot using HuggingFace Transformers, Neo4J, and LangChain.

SOFTWARE ENGINEERING INTERN | MILWAUKEE, WI | MAY 2023 - AUG 2023

- Drastically improved the logical reasoning and problem solving ability of Azure-hosted GPT-4 by implementing Retrieval-Augmented Generation using LangChain Retrievers.
- Developed a Java Microservice using Jersey & Hibernate, integrating SQL Stored Procedures and implementing Azure DevOps CI/CD pipelines.

CLARK ASSOCIATES | JUNIOR SOFTWARE ENGINEER

(Remote) Lancaster, PA | Oct 2023 – Present

- Designed and implemented a change log service for four features using ASP.NET, SQL, and Blazor, collaborating with QA for smooth deployment.
- Resolved 120+ SonarQube bugs in ASP.NET backend, reducing technical debt and improving reliability.

ALTRUTEC | SOFTWARE ENGINEERING INTERN

(Remote) Cleveland, OH | Jun 2020 – Aug 2020

FIRST (FLL & FTC) | SOFTWARE TEAM LEAD

Ashburn, VA | Aug 2014 – Jun 2021

BRIAR WOODS HIGH SCHOOL | COMPUTER SCIENCE TA

Ashburn, VA | Aug 2019 – Jun 2020

PROJECTS

LEETCOPILOT

REACT/TYPESCRIPT, TYPESCRIPT/KOA.JS, SUPABASE/POSTGRES SQL, LANGCHAIN/OPENAI

- Led a team of five in developing a Chrome extension offering AI-powered LeetCode hints.
- Engineered an Agentic Retrieval-Augmented Model using OpenAI and LangChain for JSON API responses.
- Implemented local Llama instance, cutting all development costs and enhancing development productivity.

TOP LOGGER

REACT NATIVE/TYPESCRIPT, FASTAPI/PYTHON, POCKETBASE/SQLITE, SKLEARN, DOCKER

- Developed a React Native app with TypeScript for logging routes, tracking attempts, and visualizing metrics.
- Engineered and self-hosted a FastAPI backend, querying Pocketbase's embedded SQLite database and applying multiple linear regression to estimate climbers' skill levels.

SKILLS

Languages: Python, JavaScript, Java, C#, C++, C, SQL, HTML, CSS **Frameworks:** .NET Core, React, FastAPI, LangChain, TensorFlow
Dev Tools: Git, GitHub, Agile & SCRUM, Azure DevOps, Postman **Systems & Databases:** Linux, Docker, Kubernetes, PostgreSQL
Libraries: NumPy, Pandas, SciKit, PyTorch, OpenAI, Three.js, Chart.js, Socket.IO, Selenium, Axios, SQLAlchemy, Matplotlib, Moq