

Ryan Azim Roup

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Experience

- Tech Intern** — Krishi Shwapno [\[Certificate\]](#) Mar 2026 – Jun 2026
- Developed Python and Selenium scripts to automate spreadsheet-to-dashboard data entry; supported internal data automation and workflow optimization.
- Freelance Web Developer** — Self-Employed Nov 2024 – Feb 2025
- Built functional, responsive websites for clients using modern web development technologies.
- Private Tutor** — Self-Employed Jan 2023 – Dec 2023
- Provided academic support and explained technical and academic concepts clearly to students.

Projects

Uncertainty-Aware Federated Multimodal Dual-Task Learning for Privacy-Preserving Skin Lesion Diagnosis

Undergraduate Thesis | Python, PyTorch, Swin Transformer, Attention U-Net, Federated Learning, Machine Learning [\[Research\]](#)

- Developed an uncertainty-aware federated dual-branch framework combining Swin Transformer and Attention U-Net for multimodal skin lesion classification and segmentation under privacy constraints.
- Proposed DUA-D2C aggregation to adaptively aggregate client updates using Macro-F1 and entropy-based uncertainty for privacy-preserving medical image analysis.

GhauGhau — Pet Adoption Platform

Next.js, Node.js, Tailwind CSS, MongoDB [\[Live Site\]](#)

- Built a pet adoption website connecting users with pets available for adoption.

Road Rash with Obstacles — RoadRash3D

Python, OpenGL [\[Source Code\]](#)

- Developed a 3D car-obstacle game with shooting mechanics to destroy enemy and obstacle cars, and enemy vehicles that follow the player's vehicle.

One-Scoop — Ice Cream Business Website

HTML, CSS, JavaScript [\[Live Site\]](#)

- Designed and developed the frontend of a website for an ice cream business.

Education

BRAC University [\[Degree\]](#) Jan 2022 – Feb 2026
Bachelor of Science in Computer Science and Engineering GPA: 3.75 / 4.00

Academia — A-Levels 2021 | GPA: 5.00 / 5.00

Academia — O-Levels 2019 | GPA: 4.50 / 5.00

Technical Skills

Programming: Python, JavaScript, C, Verilog, Assembly Language

Web Development: Next.js, Node.js, MERN Stack, Tailwind CSS, HTML, CSS, JavaScript

Databases: MySQL, MongoDB

AI / ML: Machine Learning, Artificial Intelligence, LLM Applications, Prompt Engineering, Computer Vision, Federated Learning

Automation & Tools: GitHub, Selenium, Web Automation, Data Automation, Clerk

Soft Skills: Communication, Leadership, Problem Solving, Time Management

Certifications & Achievements

Datathon — CUET CSE Fest 2025 — Certificate of Participation [\[Certificate\]](#)

Interests

Strategic and esports games (Chess, Valorant, Counter-Strike 2); traveling; motorcycling; pet care and welfare; robotics; microprocessors.