

# IRFAN RAHMAN

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## EDUCATION

### **Columbia University**

Bachelor of Arts in Computer Science

**Expected Graduation:** May 2026

### **Borough of Manhattan Community College (BMCC)**

Associate in Science Degree; Major: Computer Science

Sep 2022 - May 2024

GPA: 3.94/4.00

- Honors/Awards: Dean's List (Fall 2022 - Spring 2024), PTK Honor Society (Spring 2023).

**Relevant Coursework:** Data Structures & Algorithms (Honors), Advanced Programming, Software Development (Honors), Web Application Development, Discrete Mathematics, Linear Algebra & Probability, Calculus III, University Physics I

## SKILLS

- Python, JavaScript, C++, Java, C, TypeScript, HTML/CSS, C#, DART, Swift, SQL, Bash, MATLAB, LaTeX
- Node.js, Git, Docker, Firebase, Linux, Flutter, TensorFlow.js, Qt, Unity, Vercel

## WORK EXPERIENCE

*IT Support Technician, BMCC, New York, NY*

10/2022 - Present

- Installed and configured 100+ software packages on Windows and macOS systems, reducing update-related support requests by ~30% and improving classroom system stability across 6 departments
- Resolved 15–20 technical issues per week, including AV malfunctions (smartboards, projectors, classroom PCs), documenting recurring problems, and proposing long-term fixes adopted by IT leadership

*Software Engineering Fellow, Headstarter, New York, NY*

06/2024 - 07/2024

- Built and deployed 3 full-stack web apps using Next.js, TypeScript, Firebase, and Vercel, including an AI chatbot and a document parsing tool; implemented dynamic routing, Firestore DB integration, and responsive UIs
- Led front-end and back-end development for a team of 2, writing modular code, setting up CI/CD pipelines, and optimizing page load times by ~40% through lazy loading and server-side rendering

*Health Tech Research Assistant, BMCC, New York, NY*

09/2023 - 04/2024

- Researched and co-designed DementiaGuard, a cross-platform mobile app prototype built using Swift for iOS and Flutter for Android, aimed at supporting dementia patients with medication tracking, voice reminders, and wearable integration ([View Poster](#))
- Created wireframes using Figma, proposed 5+ core features, and co-presented a research poster at BMCC STEM Showcase to 100+ attendees, receiving faculty backing for future MVP development

*Software Developer, Art Beyond Sight, New York, NY*

07/2023 - 08/2023

- Conducted functional testing on 10+ Drupal modules using Docker and Git to ensure CMS stability. Improved content structure by implementing metadata tagging and taxonomy systems across 150+ pages
- Led Drupal version upgrades and full-site migration; applied JavaScript to fix 20+ UI and accessibility bugs, enhance responsiveness, and resolve critical security vulnerabilities during live deployment

*Data Science Research Intern, BMCC, New York, NY*

06/2023 - 08/2023

- Developed a Python-based Mandelbrot Set visualizer using Matplotlib, NumPy, and SciPy to explore fractal geometry, complex dynamics, and visual pattern emergence in iterative systems ([View Poster](#))
- Analyzed mathematical links between chaos theory and topology, presenting findings at a faculty-led research showcase; enhanced problem-solving, numerical methods, and scientific computing skills through exploration

## PROJECTS

*Ecosort - Recycling Classifier Web App - HTML, CSS, JavaScript, and TensorFlow.js*

- Built a real-time recycling classifier using TensorFlow.js and webcam input to identify items with ~85% accuracy; developed during a 2-day hackathon to promote sustainable habits through interactive machine learning
- Led front-end design and layout for a 3-person team, integrating detection logic, UI components, and responsive styling to deliver a smooth and accessible user experience

*Road Test Simulator - C#, Unity | [Project Site](#)*

- Led a 4-person team to build a Unity-based driving simulator featuring realistic road environments, dynamic traffic signals, and interactive signage; developed as a class project and adopted by the professor for instructional use
- Integrated AI-controlled vehicles, pedestrian movement, and responsive UI elements to simulate real-world traffic scenarios; tested by 50+ students who praised its ease of use, educational design, and potential for training applications