

Afnan Ahmed Crystal

☎ +14698582460 | @afnan.ahmed.crystal@g.bracu.ac.bd | 🌐 afnan-ahmed-crystal-007 | 🎧 afnancrystal | 📍 Austin

EDUCATION

Kennesaw State University

Master of Science in Computer Science; **GPA: 3.73 / 4.00**

BRAC University

Bachelor of Science in Computer Science; **GPA: 3.73 / 4.00**

Kennesaw, Georgia

Graduated: December 2024

Dhaka, Bangladesh

Graduated (Magna Cum Laude): June 2022

- **Relevant coursework:** Object Oriented Programming, Cloud Computing, Algorithms, Software Engineering, Data Structures, Artificial Intelligence, Machine Learning, Database Systems, Cryptography

SKILLS

Programming: Java, Python, SQL, Dart, Kotlin, HTML, CSS, JavaScript, Typescript, Bash, C++, C#

Technologies: React, Flask, AWS, Azure, GCP, Git, Maven, Gradle, Flutter, Docker, Grafana, Spring Boot, Mendix

Tools: PostgreSQL, MySQL, Firebase, Node.js, NPM, Postman, Swagger, Strapi CMS, Android Studio, Visual Studio

Libraries: Scikit-Learn, Keras, TensorFlow, Numpy, PyTorch, OpenCV, LangChain, Natural Language Toolkit

EXPERIENCE

Holiday World

Full Stack Engineer

Colorado Springs, Colorado

February 2025 — Present

- Develop responsive [interfaces](#) using React, TypeScript, Tailwind CSS, Axios, Prisma, Next.js, Redux Toolkit
- Translate Figma designs into pixel-perfect UIs with reusable components, emphasizing accessibility and polish
- Store and query application data using PostgreSQL with Prisma ORM, authenticate users with Supabase
- Integrate REST APIs and Stripe payment processing, handle state management with TanStack Query
- Implement Strapi CMS backend with Docker container, debounced search, pagination, filtering, sorting, geocoding

Kennesaw State University

Software Engineer at IoT as a Service Research Lab

Kennesaw, Georgia

January 2023 — December 2024

- Designed and developed an end-to-end diet tracking [mobile app](#) using Flutter Dart, Python, Flask, PostgreSQL
- Implemented CRUD, designed database schema/relational data models in SQLAlchemy with optimized indexing
- Created REST API endpoints, wrote documentation with Swagger, tested API calls with Postman
- Deployed backend on AWS EC2 instance with Gunicorn, Nginx, S3 bucket, HTTPS/TLS, JWT authentication
- Integrated LLM APIs and prompt engineered to extract and render structured multimodal data from food images
- Trained Mask R-CNN model on SageMaker with TensorFlow/PyTorch, merged TFLite for on-device inference
- Processed glucose sensor time-series data from Raspberry Pi and visualized trends using InfluxDB and Grafana

Usha International

Software Developer

Vancouver, Canada

June 2022 — December 2022

- Developed and released an Android [e-health consultation application](#) to the Google Play Store — 1K+ downloads
- Led full cycle of frontend/backend application development using Flutter Dart, JavaScript, Bloc, OAuth, Firebase
- Crafted intuitive multi-screen UI with secure payment system, password-reset option, symptom logs, in-app forum
- Participated in agile SDLC and CI / CD practices to ensure timely delivery of quality software using Asana

PROJECTS

Pantry Tracker Web App

Pantry management app using Next.js, Material UI components, Firebase

Demo ↗ | GitHub 📁

July 2024 — August 2024

- Designed an interactive [frontend](#) in Figma and developed it to track, modify, display pantry items, with a versatile recipe suggestion (based on available ingredients) feature using Axios with OpenAI's GPT model

Travel and Tour Management Website

Model View Controller (MVC) Pattern Full Stack Application

Demo ↗ | GitHub 📁

June 2021 — September 2021

- Built a desktop GUI with Java Swing and Abstract Window Toolkit; backend using Spring Boot; Maven; Eclipse

AWARDS / CERTIFICATIONS / VOLUNTEERING

- CodePath [alumna](#), 1st & 3rd place in intra-university hackathons, competitive programming, IEEE [Publication](#)
- KSU cybersecurity summer camps [2023](#) and 2024 TA sponsored by the NSA, Dean's List, DataCamp Certificates