

Ahnaf Inkiad

857-318-6585, Boston, MA 02120, inkiad.a@northeastern.edu, [GitHub](#), [LinkedIn](#), [Website](#)

Available May 2025

Education:

Northeastern University, Boston, MA

Bachelor of Science in Computer Science | GPA: 3.4/4.0

Sept 2021-Present

Expected May 2025

Computer Knowledge:

Languages: Python (Flask, Django), JavaScript (React, Redux, NodeJS, VueJS, NextJS, Material UI), C, C++, Java, HTML, CSS, TypeScript, SQL, Dart, R, C#, Git, Linux, ROS2, AWS, Azure, Docker.

Work Experience:

Software Engineer Co-op- **Cleo Robotics**

Jul 2024-Dec 2024

- Enhanced obstacle avoidance system by fine-tuning Time-of-Flight (TOF) sensor intrinsics in C++, leading to a 30% improvement in environmental mapping accuracy and enabling safer navigation in cluttered, GPS-denied environments such as tunnels and ships.
- Refactored legacy MPA, MAVLink and uORB middleware layers in C/C++, and led the ROS1 to ROS2 migration using px4_ros_com, reducing inter-process communication complexity, lowering system latency by 25%, and improving overall maintainability and scalability.
- Developed a Python-based thermal stress test for the VOXL flight computer to simulate 99% CPU/GPU usage and assess thermal stability under extreme conditions.
- Collaborated cross-functionally with hardware, QA, and flight operations teams during field testing to validate software updates, debug sensor calibration, and optimize Microhard and Doodle radio performance, improving integration efficiency and reducing communication latency by 20%.

Software Engineer Co-op- **Harvard Kennedy School**

Jul 2023-Dec 2023

- Automated software installations and real-time system checks by developing ElectronJS desktop application for loaner laptops, thereby streamlining onboarding process and reducing redundancies by 75%.
- Led the development of customized HKSIT chatbot with Langchain and ChromaDB by using Python, integrating PostgreSQL database and Flask-Login for secure user management, employing Django/Jinja for robust backend and template handling, ensuring comprehensive testing through Pytest, and deploying the application on Terraform.
- Developed an automated incident management system leveraging VueJS, ServiceNow API and OAuth authentication, significantly enhancing technician workflows by 50%, enabling real-time status updates and communication.

Software Engineer- **Code4Community**

Jan 2024-Present

- Developed key features for BCAN using Vite.js (frontend) and NestJS (backend), including active/inactive grant status icons, sorting functionality, and grant-saving—enhancing user efficiency by 40%.
- Revamped C4C recruitment portal using TypeScript, Nx and PostgreSQL, implementing recruiter-controlled progression endpoints and achieving 100% Jest test coverage, reducing critical failures by 50%.

Software Engineer- **Mars Rover Team & AerospaceNU**

Sept 2023-Dec 2023

- Implemented an Error Console for the Rover UI to display node errors and refined Turret control(-180 to 180 degrees), using ROS2(Python) and Typescript for backend and frontend integration.
- Developed and integrated autonomous navigation capabilities for drones using Ardupilot and Pymavlink, enabling precise takeoff, navigation from point X to point Y, and landing sequences within the Webots environment.

Projects:

HuskyHorizons

Aug 2023-Jan 2024

- Designed and implemented a React.js-based cultural exchange platform for the Northeastern community, integrating Socket.IO for real-time bi-directional communication between users and Firebase Authentication for secure login.
- Deployed the platform's front end on Firebase Hosting for enhanced accessibility and the back-end on Render, with the PostgreSQL database hosted on Amazon RDS for scalable and reliable storage solutions.

InsightStock

Nov 2023-Dec 2023

- Developed a stock analysis educator mobile app using Flutter and Dart, and integrated Alpha Vantage API for real-time financial data, enabling users to analyze stock trends, performance metrics, and market insights within the app.
- Incorporated OpenAI API within the app for smart, personalized education and market analysis, boosting engagement and learning, all while hosted on Firebase, showcasing the simplification of stock analysis with AI.

CircleBreaker

May 2022-Jun 2022

- Implemented the circle breaking game using MVC architecture in Java to improve the overall code structure of the project.
- Developed user-friendly UI elements- game menu, score display, and live animation of ball and paddle movements.