

Arman Ahmed Ansari

Toronto, ON | AAnsari1998@gmail.com | [GitHub](#) | [LinkedIn](#)

Software engineer with 3+ years building production C#, Python, and Django systems across distributed services, IoT, and real-time control. Experience spans multithreaded application development, cloud APIs, full-stack web development, and end-to-end system integration.

Education

Toronto Metropolitan University

M.Eng Electrical and Computer Engineering

09/2023 – 08/2025

Capstone: Edge ML Inference on Limited Hardware (3.85 CGPA)

NED University of Engineering and Technology

B.E Electrical Engineering

2016 – 2020 | Karachi, Pakistan

Part of NED Ventilator research team (National Center of Robotics and Automation)

Industry Certifications

Crestron Certified Programmer

CTI-P101, CTI-P201, CTI-P301

Control 4 Certified

Automation Programmer

Dante AoIP

Dante Level 1, Level 2

Crestron Intelligent Video

Crestron IVC-D

Professional Experience

Hitplay Technologies

12/2025 – Present

Field Engineer — Software & Controls

Toronto, ON

- Developed multithreaded C# applications running on Crestron control processors, with operator UIs supporting intuitive system control and monitoring. (C#, .NET, Angular, HTML5, CSS)
- Contributed to the development of a multithreaded control system for Toronto City Hall committee rooms, including a multicast-based driver that synchronized in-room broadcast clocks with speaking timers shown on the live broadcast stream. (C#, .NET 8.0, AngularJS, custom UDP)
- Built and shipped an internal browser extension that adds quality-of-life improvements to the team's asset management platform, eliminating repetitive lookups and streamlining day-to-day workflows. (JavaScript)
- Implemented control logic for a divisible-space AV system at Sun Life's 35th-floor events space, programming partition detection and dynamic audio/video signal routing through Crestron and Blackmagic switching systems. (C#, .NET)

Wajda Group

03/2022 – 09/2023

Automation Engineer — IoT & Software Development

Kuwait

- Designed and implemented a remote monitoring system for solar-powered speed cameras across Kuwait City, reverse-engineering a proprietary serial protocol used by the inverters and building the embedded software, web UI, and database that tracked battery health, video output, and system stats — resulting in improved uptime and reduced on-site maintenance. (Python, Django, PostgreSQL, multithreading)
- Led a cross-functional team that designed and implemented an e-commerce service in the consumer IoT space, leveraging scalable cloud APIs and secure payment integrations to enable direct device-to-cloud purchasing, resulting in a seamless end-user experience and a 30% reduction in operational overhead. (Node.js, REST APIs, AWS)
- Designed and built the operator UX/UI for an on-air radio news studio, delivering a purpose-built interface with custom presets and macros tailored to each operating radio engineer. (Angular, Python)

Synergy Technologies Pvt. Ltd.

12/2020 – 01/2022

Application Engineer — Software Development

Karachi, Pakistan

- Developed custom mobile and web-based interfaces and backend drivers in Python, C#, and Lua to control automation systems, enabling seamless integration with third-party devices and remote-access functionality. (Python, C#, Lua, React, React Native)
- Led the development of a custom internal CRM solution which improved customer satisfaction and reduced service wait time. (Python, Django, PostgreSQL)
- Developed a reusable test module library for Crestron automation systems, enabling full in-office testing and smoother deployments and client handovers. (C#, .NET)

Open Source

Patrician-Bot

2016 – Present

Open-source Discord application — solo author and maintainer

~200,000 daily users

- Designed and built an async-first Discord bot serving roughly 200,000 daily users, with music statistics, trivia, and integrations with the Last.fm and YouTube APIs; implemented Discord gateway sharding to distribute the workload across multiple processes and regions, scaling within upstream rate limits. (Python, asyncio, aiohttp, AWS EC2, PostgreSQL, Redis)
- Executed two full architectural rewrites in response to upstream API changes — first migrating to Discord's Slash Command API (schema migrations, dynamic command registration, backward-compatibility layer), then adapting to Discord's OAuth2 / privileged intents permission model.

Skills

Python

Django, FastAPI, Flask

C# / .NET

ASP.NET, multithreaded apps

Protocols

MQTT, BACnet, Modbus, UDP

JavaScript / Node

React, React Native, Vue, Angular

Cloud Services

AWS (EC2, S3, Lambda), Azure

Testing

Unit, integration, mock-based

Databases

PostgreSQL, MongoDB

API Development

REST, GraphQL

DevOps

Docker, GitLab CI, Kubernetes

Monitoring

Prometheus, Grafana

Data Analytics

Hadoop, Spark, Elastic

Agile

Kanban, Jira