

# Murtaza Hussaini

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## Objective

Computer Engineering graduate from York University with 3 years of hands-on software development experience in automation, infrastructure scripting, and embedded networking systems. Seeking to join Ciena as an Automation Engineer to innovate with AI-powered test frameworks, Python-based scripting, and scalable CI/CD practices.

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## Highlights of Skills & Qualifications

- **Programming & Automation:** Python (PyTest, Robot Framework), C++ (Google Test), Bash, Java (JUnit), Object-Oriented Design
  - **AI & Test Automation:** Experience with AI/ML concepts and frameworks; built Gen-AI-inspired smart alert systems
  - **Tools & Technologies:** Git, Bitbucket, Jenkins, GitLab, GDB, Yocto, Docker, Kubernetes
  - **Networking & Systems:** TCP/IP, Linux OS, OTN, SONET/SDH, DWDM, SDN/NFV principles
  - **Development Practices:** Agile, CI/CD, sprint planning, performance testing, cross-functional collaboration
  - **Soft Skills:** Strong communicator, analytical thinker, adaptable, collaborative
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## Education

### Bachelor of Engineering – Computer Engineering

*York University – Toronto, ON*

April 2025

**Relevant Courses:** Embedded Systems, Real-Time Operating Systems, Software Testing, Digital Communication, Computer Architecture

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## Professional Experience

**Redline Communications — *Embedded Systems Developer Intern***

Markham, ON | Jan 2023 – Apr 2023

**Tech Stack:** C++, Google Test, Bash, Yocto, Linux, GDB

- Developed C++ modules for wireless routers and embedded packet systems
  - Built automated tests with Google Test to validate OTN packet routing and transport logic
  - Created custom Linux builds using Yocto and automated deployments with Bash scripting
  - Collaborated in Agile sprints with QA and hardware teams on cross-module integration
  - **Accomplishment:** Reduced post-deployment bugs by 30% and improved uptime by 25% through automated validation and protocol stack optimization
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### **RBC Bank — *Software Developer Intern – Infrastructure Automation***

Toronto, ON | Jan 2022 – Dec 2022

**Tech Stack:** Python (Robot Framework), Java (JUnit), Bash, Jenkins, GitLab

- Automated infrastructure health checks and alert systems using Python and Robot Framework
  - Designed RESTful APIs to enable smart internal diagnostics and alert routing
  - Implemented CI/CD pipelines in Jenkins and GitLab for rapid, error-free deployment
  - Visualized performance metrics with Grafana and helped streamline resolution times
  - Built a Gen-AI-inspired smart alerting system using pattern-based anomaly detection, laying foundation for future AI/ML-based monitoring tools
  - **Accomplishment:** Spearheaded a Gen-AI-inspired smart alert system that reduced manual troubleshooting by 8+ hours/week and improved monitoring coverage by 40%
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### **Automated Vacuuming Intelligent Device (AVID)**

*Embedded C++, Arduino, IMU, Bluetooth, Python*

- Designed navigation logic using IMU and ultrasonic sensors for autonomous room scanning
- Integrated Bluetooth control via Android app for user interaction
- Applied **lightweight AI logic** to dynamically adjust path planning and detect unusual motion drift
- Modular firmware enabled future expansion to CO/air sensors and power management

 [GitHub](#) |  [Demo Video](#)

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### **Certifications & Awards**

- **VxWorks RTOS Developer Training** – Celestica Internal Program (2024)
  - **Cisco Certified Network Associate (CCNA)** – 2024
  - **Top 3 Finalist** – RBC Innovation Challenge – 2022
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## **Volunteer / Extra-Curricular**

### **Hack the Valley** – *Volunteer Mentor*

- Guided junior developers in IoT and Bluetooth-based automation projects