Iulian Andrei Ionita

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PERSONAL STATEMENT

As a final-year Mechatronics & Robotics student passionate about Cloud infrastructure and automation, I combine engineering precision with modern software delivery practices. Through hands-on projects and my internship at Philip Morris, I have architected secure Azure environments and automated CI/CD pipelines, demonstrating a proactive approach to solving complex integration challenges.

Experience

Philip Morris Romania
Technical Lead Intern **| Jun 2025 – Sep 2025**

Collaborated with cross-functional teams (Production, Quality Assurance) to streamline technical operations and ensure equipment reliability.
Contributed to an automation project for industrial equipment, applying **engineering principles** to optimize performance and reduce manual intervention.
Analyzed process data to inform strategic planning, demonstrating strong **analytical thinking** and attention to detail.
Skills Gained: **Technical operations, automation fundamentals, cross-functional collaboration, process analysis, leadership, communication**.

Education

University POLITEHNICA of Bucharest
Bucharest, Romania

Bachelor of Science (B.S.)
Advanced Robotics & Automation for Biotechnical Applications
Expected Graduation: June 2026

- **Focus:** Advanced Robotics & Automation.
- **Relevance:** Developed a strong foundation in systems thinking, algorithmic logic, and integrating hardware with software solutions.

Skills & Abilities

Tehnical Skills :

Cloud & Infrastructure: Microsoft Azure (Web Apps, SQL Serverless, ACR, Networking/Firewall), Terraform (IaC - basics).
Networking: TCP/IP, DNS, DHCP, VLANs, Subnetting, VPN Gateway, Routing.

Automation & Scripting: Python (Flask), PowerShell, Bash (for automation).

DevOps & Automation: GitHub Actions (CI/CD Pipelines), Docker (Containerization), Git (Version Control). Virtualization & Hyper-V – Setting up and managing virtual machines, virtual switches, and resource allocation.

IT Support & Technical Documentation: Providing technical assistance and writing knowledge base articles for troubleshooting.

Programming: Python (Flask, SQLAlchemy), Bash Scripting, PowerShell, SQL.

Tools & Diagnostics: Azure Log Stream, Wireshark, VS Code, Pytest (Automated Testing).

Networking: TCP/IP, DNS, VPN Gateway, Firewall Configuration.

Soft Skills :

Adaptability & Rapid Learning: Demonstrated ability to master new technologies (Azure, Terraform, Docker) independently outside of university curriculum to solve complex engineering problems.

Collaborative Problem Solving: Experienced in working with cross-functional teams (Production, QA) at Philip Morris to optimize processes, combining technical insights with operational requirements.

Analytical Thinking: Strong background in systems engineering (Mechatronics), enabling a logical approach to diagnosing root causes in complex software and hardware systems.

Communication: Skilled in translating technical challenges into clear documentation and actionable solutions for both technical and non-technical stakeholders.

Curiosity & Innovation: Passionate about exploring emerging tech trends (Cloud-Native, AI integration) and continuously improving existing systems through automation.

Activities and Interests

- Networking & Cybersecurity – Passion for securing and optimizing IT environments.
- Passionate about process automation in both software (scripts) and hardware (robotics).
- Cloud Computing & Virtualization – Exploring Microsoft Azure, Hyper-V, and containerization.
- Automation & Scripting – Experimenting with PowerShell, Bash, or Python for IT automation.
- Troubleshooting & System Optimization – Enjoys debugging and fine-tuning systems for better performance.
- Active participant in technology workshops, hackathons, and online communities (Reddit, Stack Overflow) to stay current with new trends in Cloud and DevOps.Gaming & Esports – Interest in gaming hardware, networking performance, or game server management.

Technical Projects & Accomplishments

➔ **Cloud-Native DevOps Architecture (End-to-End Implementation) | Personal Project A comprehensive DevOps laboratory designed to simulate real-world production scenarios, automated workflows, and cloud security standards.**

Infrastructure: Architected a scalable PaaS solution on Microsoft Azure using Web App for Containers (Linux) and Azure SQL Database (Serverless), optimizing for cost and performance. Implementation & Automation: Engineered a full CI/CD pipeline using GitHub Actions to automate testing (pytest), Docker image builds, and publishing to Azure Container Registry (ACR).

Automation (CI/CD): Engineered a "Commit-to-Cloud" pipeline using GitHub Actions. The workflow automatically runs unit tests (pytest), builds multi-stage Docker images, pushes them to Azure Container Registry (ACR), and executes zero-downtime deployments. Outcome: A functional, scalable, and secure web solution demonstrating proficiency in cloud infrastructure design, automation (CI/CD), and advanced diagnostics.

Production Debugging: Diagnosed and resolved complex integration issues, including:

Networking: Solved cross-region connection timeouts by analyzing outbound traffic and configuring strict SQL Firewall whitelisting.

System Dependencies: Fixed container failures by identifying missing Linux ODBC drivers and re-engineering the Dockerfile to include system-level dependencies (msodbcsql18).

Security: Implemented DevSecOps best practices by managing all sensitive data (Connection Strings, API Keys) via GitHub Secrets, injecting them as environment variables at runtime.

➔ **Automated Network Monitoring with PowerShell**

I have developed a PowerShell script to monitor network traffic, check server uptime, and generate alerts for downtime or security risks.
Skills Used: PowerShell scripting, Windows Event Viewer, Performance Monitor, Automation.
Outcome: Enhanced network reliability by reducing downtime and automating system health checks.