Justin-Marian Popescu

| (+40)0773977421 | pmarianjustin@gmail.com | LinkedIn | GitHub |

About Me

Final-year student at the University Politehnica of Bucharest with a passion for Machine Learning and Deep Learning, especially in Computer Vision. For about a year, the focus has been on deepening knowledge in this area, with a bachelor's thesis centered on human motion detection.

Experienced in Python, using libraries like NumPy, Pandas, Scikit-learn, Matplotlib, and Seaborn along with skills in C/C++, Java, Git, and Bash. Eager to apply these skills in real-world AI projects, contributing meaningfully and continuously learning along the way.

Work Experience

Practical Training - Government Organization *Bucharest, Romania*
June 2024 – Sept 2024

- Automated the administration of NGN communication networks using Python scripts, focusing on L2VPN, L3VPN, and MPLS protocols.
- Configured and tested protocols such as OSPF, IS-IS, BGP, and MPLS, ensuring stable and efficient routing between autonomous systems.
- Utilized the EVE-NG (Emulated Virtual Environment) platform to simulate network topologies, including router and firewall configurations, ensuring secure communication.
- Designed and implemented IPsec tunnels for secure communication across FortiGate firewalls.
- Developed Python scripts for monitoring network configurations and automating routine tasks, optimizing network management workflows.

Education

Faculty of Automatic Control And Computer Science Bucharest, Romania
Bachelor in Computer Science and Engineering *Sep 2021 – Present*
Expected graduation year: 2025

- Relevant coursework: Object-Oriented Programming, Computer Graphics, Communication Protocols, Operating Systems, Parallel-Distributed Algorithms, and Architecture of Modern Processors

Alexandru Odobescu, National College Pitesti, Arges
High School Diploma; Mathematics & Informatics Intensive *Sep 2017 – Sep 2021*

- Completed with a focus on Mathematics & Informatics.

University Projects

Simple Blockchain | *GitHub*

- Structured transaction graphs with adjacency lists, integrating K-Cluster for effective transaction ordering.
- Applied BFS/DFS for graph traversal, and incorporated BlockDAG for improved scalability and speed.

BMP Small Image Library | *GitHub*

- Created a BMP image manipulation library, supporting functionalities like saving, editing, and drawing shapes.
- Simplified the BMP file structure to enhance accessibility, including file headers and pixel data handling.

AVL Treemap | *GitHub*

- Developed an API for managing AVL trees in C with encryption, supporting efficient range-based queries.
- Optimized AVL tree operations (insertion, deletion, lookup) for logarithmic time complexity.

Query Language | *GitHub*

- Designed a custom query language in Scala for CSV data manipulation, with capabilities for parsing, filtering, and merging tables and it enhances the flexibility, allowing complex transformations across large datasets.

Ethernet VLAN Switch | *GitHub*

- Developed a Python-based virtual Ethernet switch with VLAN segmentation, MAC address learning, IEEE 802.1Q tagging, and efficient frame forwarding.
- Integrated Spanning Tree Protocol (STP) for loop prevention, enabling reliable frame forwarding across network.

Simulation BitTorrent Protocol | *GitHub*

- Simulated BitTorrent protocol with MPI, distributing file segments across nodes for decentralized P2P file sharing.
- Implemented tracker and client logic for load balancing, non-sequential segment retrieval, and client seeding.

Workshops

CCNAv7 - ENSA *March 2024 – May 2024*

- Learned how to configure OSPFv2, manage network security with ACLs, and set up NAT services. Worked on optimizing and troubleshooting network architectures for WANs.

Python 101 *Oct 2023 – Feb 2024*

- Acquired a comprehensive foundation in Python, emphasizing syntax, data structures, Git basics, and developed interactive Flask web applications for practical learning.

Web 101 *Oct 2022 – Feb 2023*

- Gained fundamentals knowledge in crafting responsive websites using HTML, CSS, and JavaScript, with focus on user experiences and interface design.

CCNAv7 - SRWE *Oct 2022 – Feb 2023*

- Mastered networking essentials, including advanced switching, routing techniques, VLAN setup, and foundational concepts of IPv4/IPv6 for efficient network management.

CCNAv7 - ITN *Oct 2022 – Feb 2023*

- Explored the core aspects of network device configurations, emphasizing practical connectivity solutions, effective troubleshooting methods, and network security basics.

Hard & Soft Skills

Languages: Python, C/C++, Java, MATLAB/Octave, Bash, SQL, JavaScript, HTML, CSS, Scala

Technologies: Git, GitHub, NumPy, Pandas, Scikit-learn, Matplotlib, Seaborn, Jupyter, Google Colab, Flask, MPI, Makefile, CMake, OpenGL, Oracle DB, Docker

Technical: Data Structures, Algorithms, Multithreading, Memory Management, Unit Testing, Debugging, Scripting, Automation, Version Control, Database Management, Web Development Basics

Personal: Analytical Thinking, Creativity, Perseverance, Adaptability, Attention to Details, Effective Communication, Proactive Collaboration, Decision Making, Self-Motivation, Time Management