Patrick **Fabbiani**
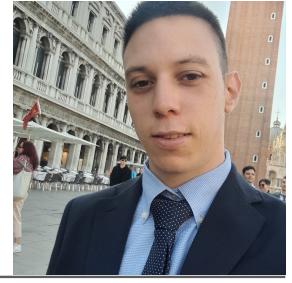
GRADUATED IN CYBERSECURITY AT CA' FOSCARI UNIVERSITY
via A. Scarsellini, 7, Marghera, Venice, 30175, Italy
via Colomel, 2, Romallo, Novella, 38028, Italy

📱 (+39) 348 44 58 721 | ✉ patrick1fabbiani@gmail.com | 🏠 patrick2734.github.io | 🐙 patrick2734 | 💼 patrick-fabbiani-495615128

Career Objective

I aim to secure a role in cybersecurity and secure software development, where I can apply my expertise in static analysis, cryptography, and full-stack engineering to build resilient systems and mitigate complex threats. My research with LiSA, hands-on labs in network/web attacks, and development of security tools reflect my commitment to proactive defense and technical depth. I thrive in dynamic environments that value initiative, collaboration, and continuous innovation.

Driven by curiosity and discipline, I seek to grow within a forward-thinking organization, contributing to high-impact projects while staying ahead of emerging technologies. My goal is to become a trusted cybersecurity professional — not just solving today's problems, but architecting tomorrow's secure digital foundations

Summary

Innovative Computer Scientist with expertise in cybersecurity, data protection, and risk management. Skilled in identifying and mitigating security threats, with experience in encryption, firewalls, IDS, and vulnerability assessments. Proven ability to develop robust security systems and solutions to safeguard organizational assets.
Driving License: Category AM, B / self-propelled

Health

Incident

Romallo, Trento - Italy
11/07/2010

PROTECTED CATEGORIES PURSUANT TO ART. 18, PARAGRAPH 1, LAW 68/1999

Following a mountain accident that caused me to go into a coma, I developed deep personal resilience, adaptability, and determination. This experience taught me how to manage complex situations, face challenges with strength of character, and maintain a positive attitude in the face of difficulties.

Diabetes

Trento / Venice - Italy
Dec. 2008

TYPE 1 DIABETES - INSULIN DEPENDENT

Diagnosed with Type 1 Diabetes at the age of X, requiring daily insulin administration to manage blood glucose levels. Ongoing monitoring and treatment to maintain healthy glucose levels and prevent complications. Regular visits to endocrinologist and diabetes care team.

Work Experience

Ca' Foscari University (Co.Co.Co. 9 months)

Venice - Italy
Jul. 2025 – Mar. 2026

RESEARCHER AND DEVELOPER OF LEARNING SIMULATIONS

- Developed interactive educational games and simulations focused on International Human Resource Management and Cross-Cultural Marketing using Unity and Unreal Engine.
- Integrated Artificial Intelligence techniques for performance tracking and personalized learning experiences.
- Designed and implemented gamification mechanics to enhance user engagement and learning outcomes.
- Created data visualization dashboards using Python and C++ for analyzing user performance and improving training effectiveness.
- Conducted usability testing and optimized simulations across multiple platforms (PC, mobile, VR).

(I attach the document given by the university about this research)

Ca' Foscari University

Venice - Italy
Jun. 2024 – Dec. 2024

INTERNSHIP

- Analyzed and tested the LiSA (Library for Static Analysis) plugin for taint analysis, identifying vulnerabilities and tracking data flow.
- Collaborated with development to improve taint tracking accuracy in database queries.
- Applied static analysis to assess security risks and prevent data leaks.
- Provided recommendations for enhancing data sanitization and security protocols.
- Documented findings and contributed to security reports to enhance database integrity.

Metropolitan City of Venice, IT Sector

Venice - Italy
Nov. 2020 – Feb. 2021

INTERNSHIP

- Created thematic tables for the General Territorial Plan (PTG) to support urban planning.
- Mapped bike-sharing station locations and secondary schools in Venice using GIS tools.
- Managed and organized geospatial data for accuracy and consistency in territorial development.
- Collaborated with urban planners and local authorities for effective data-driven decision-making.
- Delivered actionable insights through visualized maps and geospatial reports
- Used QGIS to map 30+ bike-sharing stations, improving urban planning efficiency.

Personal study

Unity Test Project

Personal Project
2025

SELF-PACED LEARNING

Independent acquisition of fundamental game development skills with Unity and Unreal Engine, with a focus on C# scripting, physics, UI, and engine architecture. Practical application through the development of personal projects (e.g., 3D games, memory games). Advanced use of generative AI tools (ChatGPT, Qwen) to support software development, debugging, and documentation.

Projects

Accademic thesis

Master thesis, LiSA taint analyzer (Dataset)
Ca' Foscari University - MSc
THESIS AUTHOR
Jul. 2024 - May. 2025
Conducted a research study on taint analysis applied to datasets, using the LiSA static analysis framework.
This study is based on LiSA analyzer (a library for static analysis developed at Ca' Foscari) and the goal is to improve program security, data integrity, data confidentiality,...
Conducted research on adapting taint analysis to track data flow and ensure integrity in datasets, proposing scalable "taint markers" for real-time detection of unauthorized modifications. Demonstrated feasibility and value of the framework in enhancing data security for sensitive sectors like finance, healthcare, and government.

Bachelor thesis - General Territorial Plan (PTG)
Ca' Foscari University - BS
THESIS AUTHOR
Nov. 2020 - Feb. 2021
Collaboration with the agency for the creation of thematic maps for the General Territorial Plan (PTG).

High school thesis

High school thesis, Traffic Light Intersection Simulation Project
ITIS C. Zuccante
THESIS AUTHOR
Mar. 2017 - Jun. 2017
Designed and implemented a simulation of a four-way traffic light intersection using PLC, RTU, and SCADA technologies. The system included both vehicular and pedestrian signal management with day/night modes and manual pedestrian request functionality. Developed hardware and software prototypes using Siemens LOGO, SCADA IdroNetwork, and RTU ISET-IS35. Implemented data logging, alarm visualization, and user interaction via graphical interfaces. Conducted alpha and beta testing to ensure system stability and functionality in realistic scenarios.

Accademic projects

Network Security
Ca' Foscari University - MSc
ATTACKER FOR CHALLENGE
Jan. 2025 – May 2025
Completed network security labs involving: Network setup with Linux, Docker, and Wireshark. WPA cracking using aircrack-ng. RADIUS-based WPA-Enterprise configuration. TCP attacks (SYN flooding, MITM), firewall rules with iptables. BGP hijacking simulation and mitigation.

Web Security - Personal Projects
Ca' Foscari University - MSc
DEVELOPER
Feb. 2025 – May 2025
Developed tools to explore web vulnerabilities: SOP (Same-Origin Policy) evaluator in JavaScript, CORS policy simulator using Flask.

Web Security Challenges
Ca' Foscari University - MSc
ATTACKER FOR CHALLENGE
Jan. 2025 – May 2025
Explored vulnerabilities on PortSwigger using Burp Suite: Broken access control, CSRF, XSS, session hijacking, Logic flaws and insecure API behaviors. Created Python crawlers to extract HSTS and CSP policies from websites.

Network Security - HCF
Ca' Foscari University - MSc
ANALYZER
Sep. 2024 – Jan. 2025
Implemented Hop Count Filtering (HCF) to detect IP spoofing using: Custom traceroute script, Python packet sniffer, Flask-based traffic analysis tool.

Static Code Analysis (Go)
Ca' Foscari University - MSc
SOFTWARE DEVELOPER
Apr. 2024 – Jun. 2024
Analyzed Go code for vulnerabilities and improved security practices.

Code Obfuscation with Hikari
Ca' Foscari University - MSc
SECURITY ANALYST
Mar. 2024
Applied obfuscation techniques using Hikari-LLVM to protect software logic.

Web App Performance Test (Tsung)
Ca' Foscari University - MSc
SOFTWARE DEVELOPER
May 2023 – Sep 2023
Evaluated performance of a movie database web application using Tsung.

Face Detection System
Ca' Foscari University - MSc
FULL-STACK DEVELOPER
Nov. 2021 – Jun. 2022
Built a face detection system using Java and OpenCV based on the Viola–Jones algorithm.

Mine Hunter Robot (Lego Mindstorm)
Ca' Foscari University - BS
TEAM PROJECT - DEVELOPER
Oct. 2019 – May 2020
Designed a mine-detection robot with Android app integration for camera guidance.

E-commerce Simulation
Ca' Foscari University - BS
TEAM PROJECT - WEB APP DEVELOPER
Jun. 2019 – Aug. 2019
Simulated an online store with user and game management features.

Arduino Projects
ITIS C. Zuccante
SOFTWARE DEVELOPER
Sep. 2014 – Jun. 2017
Built embedded systems including traffic light simulation, keypad interface, and LCD displays.

Progetti personali _

Cyber Security and Threat Analysis

Forensic scanner in Python

DEVELOPER   *2026*

Design of a forensic scanner in Python for file identification on streams, JSON report generation and hash validation.

Self-training UBA

SECURITY ML ENGINEER   *2026*

Autonomous UBA system – Self-trained ML model detecting 77k+ anomalies across 1k+ events; generates explicit alerts (e.g., new locations, brute-force) with zero manual labeling.

Log Analyzer

SOC ANALYST   *2025*

Security log analyzer for detecting brute-force attacks by counting failed logins per IP. It provides real-time alerts and actionable recommendations (e.g., blocking IPs via firewall or fail2ban).

Fake Login Detection

THREAT DETECTION DEVELOPER   *2026*

Advanced system for distinguishing legitimate logins from credential stuffing and automated bots, based on temporal and behavioral patterns.

Password Strength

SECURITY TOOL DEVELOPER   *2025*

CLI tool for assessing password strength through entropy, weak pattern detection (sequences, repetitions), and comparison with historical breaches. It classifies passwords into 4 levels (Weak → Very Strong) and provides immediate feedback.

Dockerfile Scanner

DEVSECOPS DEVELOPER   *2025*

Modular static analyzer for Dockerfiles, detects insecure configurations (e.g., run as root, outdated images, excessive permissions). Plugin architecture for extensibility.

TCP Port Scanner

SECURITY RESEARCHER   *2025*

Educational TCP scanner in Python (low-level sockets) for authorized hosts (e.g., scanme.nmap.org). Includes ethics warnings and complies with security policies.

Adversarial Machine Learning and Security

Fraud detection

ADVERSARIAL ML RESEARCHER   *2026*

ML system for fraud detection – Random Forest on a real dataset (284k transactions) with 82.7% recall and 98.8% precision. Semi-supervised UBA – Self-training with automatic selection of high-confidence data, without manual labeling.

Adversarial Cyber

ADVERSARIAL ML RESEARCHER   *2026*

Adversarial attack simulator to test ML malware detection models. Implemented FGSM attack (100% success) and defense through adversarial training, highlighting the accuracy/robustness trade-off. Results documented in a security report compliant with ML penetration testing best practices.

Spam ML

ML SECURITY ENGINEER   *2026*

Intelligent email filter based on DistilBERT (NLP), supervised classification and Deep Q-Network (RL) for dynamic decisions (spam, ignore, reply).

AI Text Detector

AI INTEGRITY ANALYST   *2025*

A system for distinguishing AI-generated text from human text using stylometric analysis and linguistic features. Applicable to academic integrity and content moderation.

Data Engineering & Analytics

Web Scraping Framework

DATA ENGINEER   *2026*

End-to-end Python framework for ethically scraping structured data (books, prices, ratings) with advanced error handling, automatic retries, and best practices (robots.txt, rate limiting). Includes a statistical analysis module with publication-ready visualizations (distributions, correlations) and interactive HTML reporting. Generated dataset: 750+ records in 10 minutes.

Authentication and Secure Systems

OAuth System

AUTHENTICATION SYSTEM DEVELOPER   *2025*

Google OAuth 2.0 authentication system, automatic email-based admin role assignment, local HTTP server for callbacks, and JSON profile storage. Zero external dependencies.

Full-Stack and Utility Development

Artistic Text Generator with Turtle

PYTHON DEVELOPER   *2026*

Standalone application for automatically generating artistic text on a black background using Turtle. Implementation of a custom vector alphabet (26 letters, 50×100px bounding box) and numbers (0 to 9) with precise alignment, dynamic spacing, and neon color rendering. Includes automatic PNG export for each generated name.

Standalone sudoku solver

PYTHON DEVELOPER   *2026*

A complete application for solving and generating Sudoku puzzles with backtracking, custom input (81 characters), and text display. Includes single-solution puzzle generation and automatic verification.

Standalone 3×3×3 Rubik's Cube Solver in Python

FULL-STACK DEVELOPER   *2026*

Developed a complete Python application to simulate, manipulate, and solve the Rubik's Cube. Implemented standard notation (Singmaster) with support for basic moves (R, U', F2, etc.). Developed a text-based interface with emoji visual representation for monitoring the cube's status.

Code Editor UI (Flask/React)

FULL-STACK DEVELOPER   *2025*

Cross-platform code editor with syntax highlighting, auto-completion, integrated terminal, and customizable themes. Flask backend, React frontend.

Social Network Simulation

FULL-STACK DEVELOPER   *2024–2025*

Simulated social network (profiles, posts, messages with emoticons), with authentication, real-time updates, and responsive design. Python/Flask backend.

Web Application (Flask/JS)

WEB APPLICATION DEVELOPER   *2025*

Full-stack utility development: Memory Game, To-Do List, Expense Management.

Market Trend (Crypto)

DATA VISUALIZATION DEVELOPER   *2025*

Real-time cryptocurrency price tracking (BTC, ETH, SOL, ADA, DOGE, etc.).

Python projects

PYTHON DEVELOPER   *2024*

Utilities (calculator, cross-platform indenter, password generator, cryptographic ciphers) and games (Minesweeper, Sudoku, Hangman, AI Chess).

Education

Ca' Foscari University   *Venice, Italy*

MSC IN COMPUTER SCIENCE - CYBERSECURITY   *Sep. 2022 - Nov. 2025*

• Specializing in cybersecurity, with a focus on network security, cryptography, and risk management.
• Courses include Advanced Network Security, Cryptography, Cyber Threats and Vulnerabilities, and Ethical Hacking.
• Currently conducting research on emerging cybersecurity threats and solutions.

Ca' Foscari University   *Venice, Italy*

BS IN COMPUTER SCIENCE - DATA SCIENCE   *Sep. 2017 - Jun. 2022*

• Focused on data analysis, machine learning, and statistical modeling.

ITIS C. Zuccante   *Venice, Italy*

HIGH SCHOOL DIPLOMA IN COMPUTER SCIENCE   *Sep. 2012 - Jun. 2017*

• Graduated with a focus on programming, hardware, and software development, gaining proficiency in Java, C and C++.

Skills

Graphic Design	Adobe Photoshop
Web Development	Experienced in front-end web development using HTML and CSS, building responsive and user-friendly websites. Knowledgeable in optimizing web pages for performance and accessibility.
Programming Languages	Advanced proficiency in Java, C, C++, Python, Scala, F# and C#. Proven ability to develop efficient algorithms, work with object-oriented programming, and implement complex systems.
Microprocessors	Hands-on experience with Arduino UNO for prototyping and developing embedded systems, creating real-time data collection and control applications.
Database Management	Experienced with PostgreSQL and MySQL, including database design, query optimization, and managing relational databases for various applications.
Data Analysis	Skilled in using R and Python (Pandas, Numpy) for data analysis, statistical modeling, and data visualization. Familiar with Tsung for performance testing and distributed systems analysis.
Soft Skills	Strong team collaboration and leadership skills, with a focus on problem-solving, public speaking, adaptability, and fostering effective communication in cross-functional teams.
Organization	Proficient in project and time management, with a track record of successfully leading teams, delivering projects on time, and managing multiple tasks in fast-paced environments.
Languages	Fluent in English and Spanish, with a strong interest in learning German to expand communication skills and improve cultural understanding.
Certifications	CISCO CCNA Routing and Switching (Introduction to Networks) and B2 English certification, demonstrating a solid foundation in networking and advanced language proficiency. (I attach the certificate given by CISCO) Introduction to Generative AI Learning Path provided by Google (Introduction to Responsible AI, Introduction to Large Language Models, Introduction to Generative AI)
Organizational and Managerial Skills	Proven ability to organize, manage, and delegate tasks in group projects, ensuring efficient workflow, meeting deadlines, and fostering a collaborative environment.

Interests and Hobbies

I have a variety of interests and hobbies that keep me active and curious. I've been playing tennis for over 15 years, an experience that has taught me resilience, focus, and the value of consistent practice. I also enjoy skiing and admire the determination and strategy displayed by cyclists during challenging stages. These sports instill discipline and a drive to overcome challenges.

I'm passionate about traveling, as it allows me to explore diverse cultures, connect with people from different backgrounds, and gain fresh perspectives. My enthusiasm for technology fuels my curiosity, I love staying updated on emerging trends and innovations, which inspire me with their potential to shape the future.

Last, but not least, I have a growing appreciation for the art of chess, and I find that exploring its complexities helps me think more clearly and creatively. Just as chess is an intricate game of strategy and foresight, it encourages me to approach problems with a more adaptive and thoughtful mindset. Whether I'm analyzing new openings or learning about famous historical games, chess helps me refine my ability to tackle challenges from multiple angles.

These activities not only enrich my personal life but also strengthen my ability to adapt and think creatively.