



Simone Parrella

Date of birth: 30/04/2001 | **Place of birth:** Benevento, Italy | **Nationality:** Italian |

Gender: Male | **Phone:** (+39) 3669351766 (Mobile) | **Email address:**

simomoneparrella@gmail.com | **Website:** <https://github.com/Simone-Parrella>

● EDUCATION & TRAINING

04/09/2017 - 25/06/2020 - NAPLES, ITALY

UPPER SECONDARY SCHOOL DIPLOMA- NUNZIATELLA MILITARY SCHOOL

Scientific, mathematical, foreign language and humanities education. Basic military training, physical education and training activities; development of discipline, a sense of responsibility, the ability to work as part of a team, leadership and the management of activities in structured contexts.

Level in EQF: 4

01/09/2020 - 01/10/2023 - BENEVENTO, ITALY

BACHELOR'S DEGREE- UNIVERSITY OF SANNIO

Fundamentals of computer science and procedural and object-oriented programming; algorithms and data structures; databases; operating systems; computer networks; software engineering; mathematics and statistics; machine learning; artificial intelligence; software development and data analysis.

Level in EQF: 6

01/10/2023 - 01/08/2025 - BENEVENTO, ITALY

MASTER'S DEGREE- UNIVERSITY OF SANNIO

Advanced training in the fields of software engineering, distributed systems and complex software architectures, with a particular focus on the design, development, evaluation and security of IT systems. In-depth study of programming techniques, parallel and high-performance computing, the analysis and optimisation of systems and networks, as well as software quality management and evolution.

Expertise in the design and development of complex and distributed software systems; in the analysis and security of networks and software systems; in advanced programming and high-performance computing; in project management and innovation processes; and in the development of interactive solutions, wearable systems and virtual reality applications.

Level in EQF: 7

01/12/2025 - Current - BENEVENTO, ITALY

PHD IN INFORMATION TECHNOLOGY FOR ENGINEERING- UNIVERSITY OF SANNIO

Research activities in the field of Artificial Intelligence and the security of Large Language Models; the study and development of systems for detecting and assessing attacks and vulnerabilities in LLM-based systems; the design of experimental methodologies; the analysis of datasets and experimental results; software development and the automation of experiments; bibliographic research, critical analysis of the scientific literature, and the dissemination of research findings.

Level in EQF: 8

● WORK EXPERIENCE

06/06/2025 - CURRENT - ROME, ITALY

ARTIFICIAL INTELLIGENCE ENGINEER T-DEFENCE

- Research and development of Artificial Intelligence solutions for applications in the security and defence sectors.
- Analysis of security threats affecting Large Language Models (LLMs) and agent-based Artificial Intelligence systems.
- Design and evaluation of Artificial Intelligence architectures, retrieval pipelines and LLM-based systems.
- Analysis of emerging risks to Artificial Intelligence security and evaluation of defence approaches and strategies.

● **SKILLS**

perform project management | conduct threat intelligence | debug software | use software design patterns | assessment of risks and threats | engineering principles | Java (computer programming) | Assembly (computer programming) | ML (computer programming) | Python (computer programming) | computer programming | develop data processing applications | web programming | use concurrent programming | JavaScript Framework | use markup languages | SQL | MySQL | create database diagrams | write database documentation | manage database | NoSQL | principles of artificial intelligence | data mining | artificial neural networks | perform data mining | machine learning | deep learning | emergent technologies | algorithms | cyber security | security engineering | security threats | computer engineering | English | write English | interact verbally in English | understand spoken English | understand written English | C++ | Objective-C | C# | software design methodologies | Unity (digital game creation systems) | data extraction, transformation and loading tools | normalise data | process data | Apache Maven | tools for software configuration management

● **LANGUAGE SKILLS**

Mother tongue(s): **ITALIAN**

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B1	B1	B1	B1	B1

● **CERTIFICATIONS**

01/09/2025 Oracle
OCI AI Foundations Associate, 2025

Online - Training on the fundamentals of Artificial Intelligence, Machine Learning, Deep Learning and Generative AI, with a focus on Oracle Cloud Infrastructure’s AI services.
Link
<https://catalog-education.oracle.com/ords/certview/sharebadge?id=3BCE54A39BB4F7555EF6D215B0EB1B9BFEEB53D8ECB257E05B593F174099018D>

20/05/2022 Cambridge
Cambridge English B1

Presential - Cambridge English Language Certification, level B1 (intermediate).

● **PROJECTS**

RAG Platform and Agentic AI An Artificial Intelligence platform for document analysis and intelligent information retrieval, based on RAG and Large Language Models. It includes indexing, semantic and keyword search, question answering, summarisation, translation and agent-based workflows.

A mutation testing framework for Terraform A framework for mutation testing of Terraform infrastructure.

It automatically generates infrastructure mutations and assesses the ability of test suites to detect the changes introduced.

Smart Contract Gas Optimisation, Solidity Compiler A compiler and static analysis tool for Solidity smart contracts, designed to identify inefficient code and opportunities for optimisation to reduce gas consumption.

Cyber Threat Intelligence and Ransomware Analysis Analysis of ransomware groups, campaigns and activities. This includes the structuring of heterogeneous datasets, the extraction of Tactics, Techniques and Procedures (TTPs), the identification of relevant metrics and the comparative analysis of group behaviour.

Git Repository Metrics Analyser Automated analysis and visualisation of GitHub repository metrics, including commits, code changes, lines of code, bug fixes, authors and reviews. It incorporates object-oriented software quality metrics based on the CK model.

Classification of Respiratory Disorders A machine learning system for the automatic classification of respiratory conditions based on textual clinical reports, combining natural language processing techniques and supervised classification.

Parallel Matrix Computation Implementation and parallel optimisation of algorithms for matrix computation using C, POSIX threads and MPI, with a particular focus on load balancing and performance evaluation.

Framework for Investigation and Intelligence A framework based on Large Language Models for the collection and analysis of diverse information and the generation of structured reports using prompt engineering techniques and automated information analysis.

Cyber-Physical Traffic Management Modelling and simulation of road traffic control systems using Petri nets.

Embedded System for Mobility Control A microcontroller-based system for motion detection, data acquisition and processing, and system control.

Emergency Management Application A graphical interface developed in Dart for the management and coordination of emergencies.

RPG video game – Unity An RPG video game developed using Unity, featuring the implementation of gameplay mechanics, item management, interactions and application logic.