Francesco **Penasa**

SOLUTION ARCHITECT · SERVICE AND SOFTWARE ARCHITECTURES - CYBERSECURITY - BIOINFORMATICS

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in Francesco Penasa

"Enjoy the little detours to the fullest."

Education

UNITN (The University of Trento, DISI)   *Trento, Italy*

MASTER IN COMPUTER SCIENCE - SERVICE AND SOFTWARE ARCHITECTURES / BIOINFORMATICS: 104/110   *Sep. 2019 - Dec. 2021*

- Master's thesis: **Sedute Online** (Flutter and PHP)
  Revision of a Voting System Application through Cross-platform mobile framework with a focus on Security and Performance.
- Area Software and Service Architectures: Formal methods, Security Testing, Autonomous software agents and Multimedia data security
- Area Data Science and Bioinformatics: Machine learning and Deep learning, Data Mining
- Area Bioinformatics: Laboratory of Biological Data Mining, Algorithms for Bioinformatics and Bioinformatics Resources
- Laboratory of Computer Science Education

UNITN (The University of Trento, DISI)   *Trento, Italy*

B.S. IN COMPUTER SCIENCE: 99/110   *Sep. 2016 - Sep. 2019*

- Bachelor's thesis: **BPMN redesign through planning** (Java, PDDL, BPMN)
  Dynamic failure recovery, optimization and alternate path creation through a BPMN and PDDL integration.

Skills

DevOps	Docker, Mobile App Deployment, PowerPlatform, AWS, Azure, Swagger, Heroku
Back-end	Django, ExpressJS, Flask, LAMP Stack, Java Spring, MySQL, PostgreSQL
Front-end	Flutter, React, HTMX, HTML, JQuery, Tailwind CSS, Bootstrap CSS, JavaFX, Angular
Programming	Python, Dart, Node.js, PHP, Lua, Java, NuXMV, C, SML, R, MATLAB
Misc.	Git, Telegram Bot Development, Optical Fiber join, Microservices, Raspberry Pi, IoT, Arduino, LaTeX, AutoCAD, Fusion 360
Languages	Italian, English C1, German B1

Experience

Reply, Cluster Clash IT   *Milan, MI 20152, Italy*

CONSULTANT   *May 2023 - PRESENT*

- Generative AI solutions: Prompt Engineering and multi-agent software development (Azure OpenAI API and SDK, Flask and React)
- Microsoft Power Platform Solutions: Development, Management and Deployment of Dataverse, PowerApp, PowerAutomate and PowerBi solutions
- Backend: Python (Flask) and .NET (EF Core, Dapperer, ASP.NET) with SQL db interaction
- Frontend: React and Flutter
- DevOps: Azure DevOps, Docker, Kubernetes, Azure Functions, Azure Logic Apps
- Scrum and Agile methodologies
- **Soft Skill developed:** Structured Team Communication

Alpinformatica   *Malè, TN 38020, Italy*

SOFTWARE ENGINEER   *Dec. 2021 - May. 2023*

- Main Mobile Developer: development, build, managment and deployment (Windows, iOS, Android and Huawei) of Flutter applications
- ERP and REST API development: PHP in LAMP environment on AWS resources
- AWS Serverless development: telegram bot, GPS analysis and computation, authentication services in Python and NodeJS
- Research and optimization of company DevOps Pipeline
- Internal utility tool development and research: personalized db migration tool, pdf modifier and various utility tools in Python
- SPID and CIE integration to mobile applications; SPID and CIE company accreditation
- **Soft Skill developed:** Functional communication

Alpinformatica   *Malè, TN 38020, Italy*

INTERNSHIP IN SOFTWARE DEVELOPMENT DEPARTMENT   *Aug. 2021 - Dec. 2021*

- Development of the thesis project, the voting system: Sedute Online
- SPID integration to mobile applications and SPID company accreditation

Funivie Madonna di Campiglio

INTERNSHIP IN IT DEPARTMENT

Madonna di Campiglio, TN 38086, Italy

Jun. 2019 - Aug. 2019

- Web-app development for ticketing system, web-app security testing, integration of BancaIntesa's API
- Optical fiber management, tech assistance, mobile Operative Systems compilation

University of Trento

PART-TIME STUDENT WORK IN IT DEPARTMENT

Trento, Italy

2018

- Internal tool development

MMape

TECH SUPPORT; MUSEUM GUIDE

Croviana, TN 38027, Italy

Apr. 2016 - PRESENT

- Paypal API, Tech Support, Networking, Wordpress development and assistance
- **Soft Skill developed:** public speaking, team-working and time-management

Extracurricular Activity

Battlecraft.it/DailyQuest.it (Gaming - News and Insights)

EDITOR

Italy

June 2015 - PRESENT

- Editor for Insight articles and step-by-step guides

CoderDojo Trento (community-based computer programming clubs for young people)

VOLUNTEER

Trento, Italy

Oct. 2017 - PRESENT

- Computer Science Education for children

Certificates

Feb. 2025 **MS-4009 Extend Microsoft Copilot for Microsoft 365 with Copilot Studio**, Pipeline

Feb. 2025 **MS-4010 Build plugins and connectors for Microsoft 365 CopMOC**, Pipeline

Gen. 2025 **PSM I: Professional Scrum Master I**, Scrum.org

Apr. 2024 **Azure AI-900: Microsoft Certified: Azure AI Fundamentals**, Microsoft

Dic. 2023 **Azure PL-900: Microsoft Power Platform Fundamentals**, Microsoft

Sep. 2023 **Develop Generative AI Solutions with Azure OpenAI Service MOC AI-050**, Pipeline

Aug. 2023 **Azure AI-050T00**, Workshop at Microsoft Italia

Dec. 2022 **AWS Certified Solutions Architect – Professional**, Amazon Web Services (AWS)

Challenges

2025 **Reply Hack the code challenge (CTF and competitive programming)**, 99th internal team

2024 **Reply Code challenge**,

2021 **Google Hashcode 2021**, 2933rd

Presentation

Reply

INTERNAL COURSE PRESENTER

Sep. 2024/Mar. 2025

- Open AI Bootcamp: internal course about gen AI agents development
- Neurons Agent: development and usage of agent "Certification Study Assistant".

Sunlab

LEAD TRAINER AT SUNLAB (DIGITAL LABORATORY)

Trento, Italy

Sep. 2024 – Dec. 2024

- Designed and conducted training programs from beginner to advanced levels in digital craftsmanship.
- Covered topics including 3D CAD Design, FDM and SLA 3D printing, laser cutting, soldering, Arduino programming.

PROJECT PRESENTER – "MACROPAD PER TUTTI", "NON SOLO MACROPAD", "OUT OF THE GAME"

Trento, Italy

2024 – 2025

- Developed an embedded macro-pad using the RP2040 microcontroller with CircuitPython.
- Worked on game development projects using Scratch, Lua (LOVE2D), and Godot.

Referenze

Giuseppe Guerra   *Reply Srl*
Business Unit Manager   *2025 - Present*

• g.guerra@reply.it

Maurizio Varese   *Reply Srl*
Business Unit Manager   *2023 - 2025*

• m.varese@reply.it

Giovanni Sonna   *Alpinformatica di Giovanni Sonna -*
                                                                            Malè
CEO   *2021-2023*

• g.sonna@alpinformatica.com

Michele Bezzi   *APPM*
Coordinator   *2015*

• pgvsole@appm.it

ing. Nicola Mosca   *Funivie Madonna di Campiglio*
System Administrator   *2019*

• nicola.mosca@funiviecampiglio.it

Anna Benedetti   *MMape*
General Manager   *2016 - Present*

• annabenedetti88@gmail.com