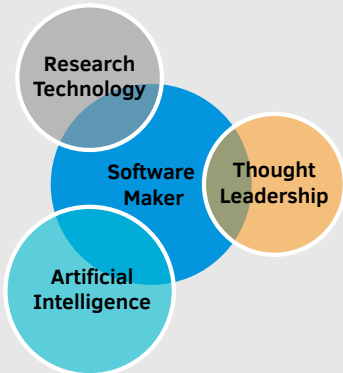# GIANCARLO FRISON

🌐 gfrison.com

✉ giancarlo@gfrison.com

in /in/gfrison

Propose solutions to business problems
Provide end-to-end software artifacts
Ambassador for innovative projects

Activities

- Full-stack programming in Scala and Javascript
- Adept to natural language processing
- Applied ML knowledge for research
- Thought leadership for stakeholders

Education

M.Sc Cognitive Systems
Open University Cyprus
2023 - Dec 2025 (estimated)

Master Thesis
Program Synthesis with Large Language Models

B.Eng, Computer Engineering
University of Padua
1995 - 1999 | Italy

Diploma in Industrial Engineering
ITIS of Bassano del Grappa
1990 - 1995 | Italy

✷ Speaker at SEMANTiCS
✷ SAP Architect Curriculum
✷ Professional Scrum Master
✷ ITIL® Certificate Service Management

Experience

Now **Software Research Engineer** — SAP, Munich
2014
- Kubrick: Functional-logic programming system with relational algebra and combinatorial primitives in a simple declarative language.
- EpiQA: Question/answering for complex retail queries. An hybrid AI (symbolic + LLMs) approach for more fine-grained resolution of customer's search utterances than retrieval-augmented generation (RAG) methods.
- BeWater: Leverage reasonable arguments from knowledge graphs for recommending products and services. The system interacts for eliciting preferences and justify recommendations.
- Zefiro: Automated salesperson. The system relies on Bayesian networks and reinforcement learning to acquire preferences and personality traits via visual elicitations and interactions. Thus, it enables product offer personalization and adapting selling strategies. A didactic utility for Bayesian networks is also available on Github.
- Charly: Conversational commerce based on an innovative neural network architecture (released 2017) integrated with Facebook Messenger and the SAP ecosystem. It allowed to easily search products, perform orders, open support tickets and question/answering over FAQ pages.
- Charon: Ideated and implemented inter-process software library deployed within SAP Commerce Cloud for facilitating developers on accessing remote services. This standard tool (available in the SAP Commerce Toolkit) leveraged reactive/event-driven programming for efficient resource allocation.

2013 **Selected Attendee** — TechPeaks, Trento
Selected for the training program of the startup accelerator on Lean Startup methodologies, business planning, corporate administration and taxation.
Released business plan for investors and obtained financial grants.
Searched for synergies with commerce partners. Acquired business license for food management.

2011 **Software Specialist** — Italy, The Netherlands
2002
- Built and tutored the distributed micro-service system for B2C and B2B SMS delivery management for a telco startup in Milan.
- Re-written the SMS B2B delivery system for Vodafone, based on micro-service architecture with FioranoMQ.
- Implemented XMPP (chat protocol for messaging applications) high performant server-to-server library in Java for a Messagging startup in Rotterdam.
- Created the BrokerTec (financial market for government securities) facility integration, for a finance company in Milan.
- Developed the VXML (Voice XML, a domain specific language for voice automation) interpreter binded with MRCP protocol (a voice protocol for negotiation audio streaming resources) for voice automated assistants.
- Implemented IBM's Rational Software Architect plugins for Low Code/No Code Model Driven Architecture to allow functional operators to setup new banking services in a UML based user interface without programming intermediaries.

Patents

Year	Title	Number
2024	Hyper-graph store representation and query mechanism.	18/972,932 Pending
2023	Time-based query processing for system dynamics.	18/078,558 Granted
2023	Database query generation with discrete training data.	18/492,418 Pending
2022	Low-code algorithm for knowledge reasoning.	18/078,566 Pending
2022	Concept search in e-commerce via word embeddings.	16/201,737 Granted
2021	Symbolic machine learning over Knowledge Graphs.	17/546,450 Pending
2021	Consumer recommender with Knowledge Graphs.	17/546,426 Pending
2021	Extraction of collations for search.	16/687,982 Granted
2021	Foraging Preferences for E-Commerce Recommendation.	16/687,951 Granted
2021	Smoothing conversational contexts for digital agents.	16/177,983 Granted