

# University of Messina, Italy Department of Mathematical and Computer Sciences, Physical Sciences and Earth Sciences

Subject: Internship Proposal

ID	PTI_EN_Fazio Maria_19/11/2025 15.10.24
Data	19/11/2025 15.10.24

### **Project Supervisor**

Surname	Fazio
Name	Maria
Department	MIFT
Laboratory	FCRIab
E-mail	mfazio@unime.it
Phone number	

### **Project Co-Supervisor**

Surname	
Name	
Job Position	
Department	



## University of Messina, Italy Department of Mathematical and Computer Sciences, Physical Sciences and Earth Sciences

Laboratory	
E-mail	
Phone number	

Project details							
Title	Agentic Al						
Detailed description: This activity aims to investigate the performance, reliability, and architectural trade-offs of available Agentic AI solutions in the literature when tackling complex, multi-step tasks. The primary objective is to compare different frameworks—such as Langghain, Autogen, CrewAI,— and analyze the specific functionalities and features, such as complex tool orchestration through function calling and API integration, and overall performance and latency.  The work will follow a three-phase approach: 1) Environment Setup, to define a controlled environment using a specific Agent framework built on a chosen Large Language Model (LLM). A fixed set of external tools (e.g., code interpreters, web search, database functions,) available to all agents will also be identified. 2) Experimentation, where controlled tests are run by adjusting key system parameters (e.g., LLM temperature for balancing creativity versus stability, memory depth,) 3) Analysis and Reporting, to calculate core metrics (e.g., success rate, average steps, average latency,).							
Duration (month – ma.	x 12)	12					
Duration (hours)		60					
Open positions		3					

## Internship Skills

Technical requirements: Good knowledge of computer networks and Al models.



# University of Messina, Italy Department of Mathematical and Computer Sciences, Physical Sciences and Earth Sciences

Other skills		