



ALMAWAVE PRESENTS VELVET: THE SUSTAINABLE AND HIGH-PERFORMANCE ITALIAN AI

- **Velvet is a Large Language Model family fully designed and built in Italy**
- **Designed as efficient, agile and energy-saving**
- **Founded on data governance and European regulatory framework compliance**
- **Integrated into "ready-to-use" applications and easily specialized**
- **Ready-to-use in the cloud, on major platforms, and on premise**

Rome, January 29, 2025 – Almageve, an Italian enterprise listed on the Euronext Growth Milan (Ticker: AIW) and a member of the Almageve Group, a Data & Artificial Intelligence player, today presented at the "Auditorium della Tecnica Confindustria" in Rome "Velvet": a family of multilingual generative Artificial Intelligence models. The models - Velvet 14B and Velvet 2B - are foundational and Instruct version Large Language Models (LLMs) which have been fully developed by the company in Italy on its own architecture, and trained on the Leonardo supercomputer managed by Cineca. The models are released in Open Source mode. The Velvet technology models for Enterprises embody the extensive expertise gained by Almageve and its personnel over more than 15 years of R&D through hundreds of AI-related projects in sectors such as Healthcare, Social Security, Justice, Security, Mobility, Finance and the Public Sector. This AI has been carefully designed within the European framework to be sustainable. It is therefore energy-saving, while also highly-performing when applied to real-use cases. The models are ready to be used on major market platforms in the cloud, on premise and on the edge. The Velvet AI is integrated into the broad portfolio of vertical AI application solutions of the Company's AIWave platform.

Valeria Sandei, Chief Executive Officer of Almageve, stated: *"Velvet emerges from a strategic decision to confidently invest in a realm of technology with vast potential, building an Artificial Intelligence designed to simultaneously condense high-performance, consumption-efficiency and great agility to perform targeted tasks in the vertical sectors in which we operate. Our vision is not to merely adapt to the European framework, but to consider it a key value during construction. This development is the result of our more than 10-year journey in language technologies, which has always focused on technical expertise in AI and which today - and increasingly in the future - can make all the difference. Almageve's wealth of knowledge has grown, both on the R&D front - in synergy with the Italian academic ecosystem - and in understanding the real-world use of these technologies, thanks to the hundreds of concrete projects undertaken. The launch of these first generative models is just the beginning and confirms our position as a leading player in Europe, with an ability to innovate, while considering AI to be an open challenge and what we have achieved to be the best marker to roll out ever-better evolutions".*

The Velvet presentation was attended by Senator Alessio Butti, Undersecretary to the Prime Minister's Office for Technological Innovation, Maurizio Tarquini, the General Manager of Confindustria, Lucilla Sioli, the European Commission's EU AI Office Director and Alberto Tripi, Chairperson of the Almageve Group. Monsignor Vincenzo Paglia, President of the "Pontificia Accademia per la Vita" ("Pontifical Academy for Life"), Professor Gianluigi Greco, President of AIXIA, and Francesco Ubertini, President of Cineca, also attended.



Velvet is an AI based on data governance and regulatory framework compliance

Velvet is a family of foundational and Instruct version generative models, fully designed on Almawave architecture, according to the AI Act guidelines and the overall regulatory framework. The models, released in Open Source mode, are multilingual, and feature specific protection capabilities of the individual languages and particularly of the Italian language. Data lineage techniques and methodologies and trained proprietary algorithms designed for this purpose were in fact used. Velvet takes a careful approach to data selection to reduce the risk of discrimination and mitigate bias. Almawave in the design paid particular attention to the issue of Privacy for a more effective and timely management of these sensitive and essential issues. An innovative element of Velvet internationally in this regard is "PAE" (Privacy Association Editing), the proprietary algorithm that allows sensitive information to be removed directly from the model where necessary, without the need for re-training.

Velvet is designed to be lightweight and sustainable

Almawave in building the model identified the point of equilibrium that maximizes performance with light infrastructural use. High-performance but energy-saving models may be used even on small infrastructure with state-of-the-art GPU processors, containing the carbon footprint and energy consumption, as well as reducing training and operating costs in extended contexts. Velvet is ready-to-use in the cloud, on premise and on the edge, thanks to partnerships with market-leading players such as AWS, Oracle, Microsoft, Dell and the one with IBM that is currently being finalised.

Velvet is integrated into "ready-to-use" applications and easily specialized

Velvet has been technically built with significant text comprehension capabilities and advanced functions that make it suitable for specific tasks for Enterprises, even in complex vertical sectors such as Healthcare, the Public Sector, Security, Finance and Mobility. A focused, fast-paced specialization that natively integrates also within AIWave, Almawave's Multiagent Artificial Intelligence platform, with more than 30 ready-to-use application solutions targeting varying sectors and focused on managing complex data and information tasks. Velvet is already being beta-tested at leading customers for concrete application use cases. Velvet is designed to be intuitive and user-friendly, cost-effective, and to provide accurate and reliable results.

Velvet, an ecosystem of scientific collaborations and projects

Almawave has always positioned itself as a company which acts in synergy with the national research, as an active part of the ecosystem and a driver of AI expertise in the industrial context.

The Velvet models are also the product of the many ongoing collaborations with the academic and research worlds, including for example Tor Vergata University, the Bruno Kessler Foundation, La Sapienza University, the University of Catania and the University of Bari. In terms of ethical and regulatory compliance, Almawave has collaborated with the SIPEIA ("Società Italiana per l'Etica nell'Intelligenza Artificiale SIPEIA" - Italian Society for the Ethics of Artificial Intelligence).

The company, in partnership with a number of leading Italian industrial entities, is part of the recent "Innovate" project for the first Industry-grade supercomputer providing Artificial Intelligence services funded by Euro HPC, which will be managed by Cineca.



Technical Specifications

VELVET 14B

A Large Language Model featuring 14 billion parameters, 6 languages (Italian, German, Spanish, French, Portuguese, English) a 127 thousand word vocabulary and a 128 thousand token context window making it suitable for the most complex document sets.

It was trained on the Leonardo Supercomputer operated by Cineca, on over 4 trillion tokens, and developed to adapt efficiently to a range of vertical industries. Its founding values include the control of training data and the ethical and sustainable management of the technology.

The model is released Open Source in the Instruct version.

The main functions of the model include: Summarization, Information Extraction, RAG (Retrieval Augmented Generation), Paraphrasing, Textual Entailment, Natural Language Inference, Common Sense Reasoning, Multistep Reasoning, Text Classification, Machine Translation, Question Answering, Text Completion, Multiturn Conversation, Function Calling.

Please refer to the model card for further details.

VELVET 2B

Velvet 2B is a model featuring 2 billion parameters, in Italian and English, with a context window of 32 thousand tokens and a vocabulary of 127 thousand words.

It has been trained on Cineca's Leonardo supercomputer with more than 2 trillion tokens.

The model was released Open Source in the Instruct version with the same functions as Velvet 14B.

Please refer to the model card for further details.

Almaxwave profile

Almaxwave S.p.A. is an Italian company, listed on the Euronext Growth Milan (AIW.MI) market and engaged in the field of Data & Artificial Intelligence. The Group offers proprietary technologies, solutions and services which realize AI and data's potential in the digital evolution of companies and public administrations. It boasts more than 400 domestic and international customers, in sectors including Government, Finance, Energy & Utilities, Tourism and Healthcare, operating directly and through partners. The Almaxwave team consists of approx. 450 professionals. The Group uses AI technology labs dedicated to developing products, platforms and vertical solutions targeting various market segments. Almaxwave's technological asset base, conceived and built as a model of natural experience in the interaction between man and machine, can interpret text and voice in over 40 languages, interacting in multi-channel mode, analyzing data and information with a view to knowledge development and automation to support decisions. Its skill centers also allow the potential of data to be achieved in complex contexts, combining expertise on key market frameworks in areas such as Data Management, Machine Learning, Location Intelligence, and the knowledge of business processes in related vertical sectors.

The Almaxwave scope, part of the Almaxviva Group, includes the companies SisTer, The Data Appeal Company, Mabrian Technologies, Obda Systems, Almaxwave do Brasil, and Almaxwave Usa. www.almaxwave.com

For further information:

Almaxwave contacts (External press office):

Thanai Bernardini, mob. 335.7245418, me@thanai.it; **Alessandro Bozzi Valenti**, mob. 348.0090866, alessandro.valenti@thanai.it

IR Contacts:

Daide Diotallevi, investor.relations@almaxwave.it

Euronext Growth Advisor Contacts:

Banca Mediolanum, tel. 02.9049.2525, ecm@mediolanum.it

Almaxviva Group Contacts: media@almaxviva.it