



As we move through the second quarter of the ChatMED project, the focus has shifted from high-level vision to the creation of a powerful technical engine. This period has been defined by significant infrastructure upgrades and the start of cutting-edge research into the multimodal capabilities of Generative AI.

Milestone: FCSE Unveils High-Performance H100 Infrastructure

The defining achievement of this quarter is a monumental leap in our technical capacity. To meet the demanding requirements of medical-grade AI, the Faculty of Computer Science and Engineering (FCSE) has officially procured and installed an NVIDIA H100 Tensor Core GPU.

This state-of-the-art infrastructure transforms ChatMED's potential. Combined with our existing clusters, this high-performance environment allows the team to train and host complex AI models locally. By possessing this raw compute power, we ensure that our research into specialized medical agents remains fast, secure, and technologically sovereign.

Technical Feature: Exploring Multimodal AI Frontiers

While standard Large Language Models (LLMs) are text-driven, clinical reality is multimodal—combining patient records with imaging and signals. This quarter, our Working Groups have begun exploring the multimodal capabilities of LLMs to understand their potential in neurological diagnostics.

Vision & Reason:

We are investigating how AI can "reason" across diverse data types, such as correlating text-based medical histories with imaging modalities (MRI and CT scans).

Initial Results:

Early explorations show that multimodal integration significantly improves clinical context awareness, laying the groundwork for more accurate, "human-in-the-loop" evaluation systems.

Capacity Building: Preparing for Strumica 2025

A core mission of ChatMED is to elevate regional expertise. FCSE has been hard at work developing a comprehensive suite of training materials for our first major educational event, planned for CiiT 2025 in Strumica.

These FCSE-led materials are designed to take participants from fundamentals to mastery. The curriculum prepared this quarter includes:



Generative AI Basics: A deep dive into the core principles of foundation models.



Hands-on Generative AI: Practical labs for implementing AI in clinical scenarios.



Networking & Collaboration: Strategies for building interdisciplinary research links.



Infrastructure & HPC: Training on how to utilize high-performance computing (like our new H100s) for AI tasks.

Roadmap: Attracting Industry Excellence at CiiT 2025

Our sights are now set on April 2025 and the 22nd CiiT Conference. A major highlight will be the ChatMED Industry Panel, where we aim to bridge the gap between academia and the private sector.

We are actively reaching out to regional healthcare vendors, diagnostic centers, and technology firms. The goal is to showcase our initial multimodal results and high-performance infrastructure to foster partnerships that will turn our research into practical, market-ready healthcare solutions.

A Message from the Project Coordinator



"In Q2, we built the engine. By securing the H100 infrastructure and mastering the curriculums for our Strumica training, FCSE has ensured that ChatMED is ready to deliver. We are excited to open our doors to the industry this April to co-create the future of medical AI."

— Dr. Monika Simjanoska Misheva, Project Coordinator

Coming up in Q3



Industry Panel @ CiiT 2025: Merging research with the medical market.



Strumica Training Event: The first hands-on immersion for our regional community.



Staff Exchanges: Intensive technical training at the Jožef Stefan Institute.

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