

The AI Research and Innovation Hub

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Launched by the Research and Innovation Sector, the AI Research and Innovation Hub is a key initiative designed to empower researchers, faculty members, and students with advanced AI capabilities. By providing the cutting-edge tools, resources, and dedicated expert support needed to accelerate discovery and elevate research quality, the Hub directly supports Qatar University's broader efforts to drive impactful innovation and develop knowledge-based solutions for our unique national challenges.

The initiative also contributes to strengthening Qatar University's leading role in AI research at both the regional and international levels by focusing on the creation of localized, homegrown AI solutions tailored to national needs.

The AI Research and Innovation Hub was established through close collaboration between the Research and Innovation Sector and the Information Technology Services Department, which played a pivotal role in providing the technical support required to develop and operate the Hub, enabling researchers to access and utilize its resources efficiently.

What resources does the Hub provide?

For high-performance computing, researchers have direct access to state-of-the-art hardware designed specifically to handle heavy AI workloads. This includes high-performance NVIDIA H100 and L4 GPUs, alongside Google Cloud TPUs, allowing teams to process large

datasets and train machine learning models much more efficiently.

Beyond raw hardware, Hub offers a comprehensive suite of advanced tools within the Google Cloud ecosystem. This includes Vertex AI, a unified platform that manages the entire AI application lifecycle—from preparing data to deploying the final model. Researchers can also explore the Model Garden to easily access and customize pre-trained models like Gemini and Llama. For projects with massive datasets, secure cloud storage and advanced data analytics tools are fully integrated to make handling and analyzing research data easier.

To accommodate different project needs, the Hub provides two flexible access methods. Researchers can request self-managed Virtual Machines (VMs) if they need full control to build custom environments. Alternatively, those who prefer not to manage system configuration can use the Managed Platform directly through Vertex AI to focus entirely on experimenting and building models.

Who can benefit from Hub?

All QU members, including researchers, faculty, and students across all colleges and research centers, can utilize Hub's resources for research, teaching, and learning. Currently, the platform supports a wide range of innovative projects spanning fields like healthcare, agriculture, telecommunications, energy management, and language processing. Examples of ongoing projects include designing AI-assisted surgical procedures, analyzing DNA and proteins to predict autoimmune diseases before symptoms appear, developing next-generation communication systems for 6G networks, and building models to automatically score Arabic essays. Alongside research, the Hub fully supports the university's academic curricula. For instance, it provides the vital computational resources required for the newly launched Bachelor of Science in Artificial Intelligence at the College of Engineering. The complete list of ongoing projects is available on the official website: https://www.qu.edu.qa/en-us/qu-ai/.

How can researchers access these resources?

We invite researchers to visit the official portal (https://www.qu.edu.qa/en-us/qu-ai/) to learn more about the available computing resources, explore our training materials, and find simple step-by-step instructions on how to submit project requests.

An open call for discovery and innovation

With this new initiative, the QU research community is well-positioned to swiftly turn ambitious ideas into tangible discoveries that address pressing national and global challenges. In this context, the Research and Innovation Sector extends an open invitation to innovate with AI. Faculty and researchers from all disciplines, regardless of their prior technical experience, are encouraged to explore how these advanced AI tools can enhance their research and creative efforts.