

Weekly Bytes on Innovation and New Trends

Quantum Computing as a Service (QCaaS)



In 2024, Quantum Computing as a Service (QCaaS) will emerge as a viable model for businesses to access quantum computing resources on-demand, without the need for significant upfront investment in hardware and infrastructure.

QCaaS providers will offer cloud-based quantum computing platforms, software tools, and support services to enable businesses to experiment with quantum algorithms and applications.

Business owners should explore QCaaS offerings to leverage quantum computing capabilities and drive innovation in their organizations.

In conclusion, quantum computing holds immense promise for businesses seeking to unlock new capabilities, solve complex problems, and gain a competitive edge in the digital age.

Apple Offers Free AI Training for Developer Academy Students



Apple will provide free AI training for all students and mentors enrolled in its Developer Academy program to encourage the next generation of developers to embrace AI.

Launched in 2013, the Apple Developer Academy offers free tuition for coding and app design for iPhone, iPad and Mac.

The company announced it will be expanding its training program, offering courses on AI fundamentals and how to build and train AI models.

Apple says it will also provide extensive lessons on how to leverage CoreML, the company's framework for developing AI and machine learning applications capable of running on Apple devices.

Participants will be given project-based assignments and be supported by mentors versed in AI. They'll also be given access to developer tools like Xcode 16, the latest edition of Apple's integrated development environment, which includes coding assistant tools such as Swift Assist.

Amazon, Meta-Backed Scale AI Raises \$1B, Boosting Value to \$13.8B



Revolutionizing the way we live and work, this emerging technology is all set to take you from the real world into the virtual one.

With the help of Augmented Reality and Virtual Reality, companies can create a facsimile version of the real world where people can collaborate, conduct training and demos, and close deals in real time.

This latest technology is gaining traction because of the real-world experience it's bringing in. Nike generated 3100 Ethereum of revenue (\$8million dollars) in just a week by selling its virtual sneakers.

Accenture has already built a metaverse habitat called Nth Floor, which replicates their real-world office, where the employees can waltz into the office space and carry out their tasks without requiring to be present physically in the office.

Tech giants like Facebook (currently named as Meta), Microsoft, Google, and Nvidia are already investing heavily in this newest technology and experts predict that this technology will add up to \$5 trillion revenue to the global economy by 2030

MIT Researchers Develop Generative AI Tool to Boost Database Searches



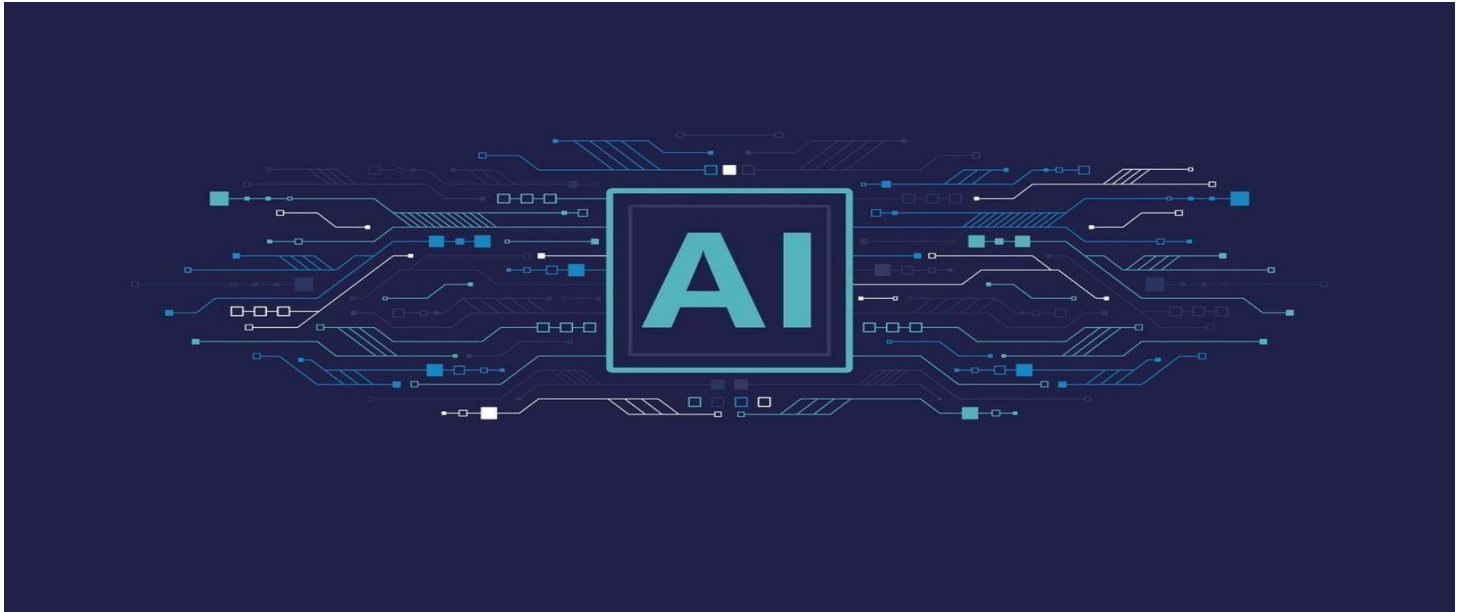
MIT researchers have developed a generative AI tool for databases that lets users analyze data and make predictions about future data or fill in missing information.

Gen SQL is an extension of the Structured Query Language (SQL) programming language that integrates probabilistic programming with traditional database searches.

It lets users analyze existing data, make predictions about future data and fill in missing information by combining SQL with probabilistic models of tabular data. The generative AI-powered tool lets business users ask complex questions that combine actual data with probabilistic reasoning, providing them with more nuanced insights about a product or service. The tool is designed to let developers employ probabilistic modeling in databases without requiring prior expertise in probabilistic programming.

“With Gen SQL, both typical users and experts can more easily and interactively query generative models to test their validity, both qualitatively and quantitatively,” the paper reads.

Hugging Face Acquires AI Software Startup to Boost Datasets



Open source code repository Hugging Face is acquiring AI software developer Argilla in a \$10 million deal. Founded in 2017, the Spanish startup built a collaboration platform for AI engineers to improve their data to improve natural language processing (NLP) applications.

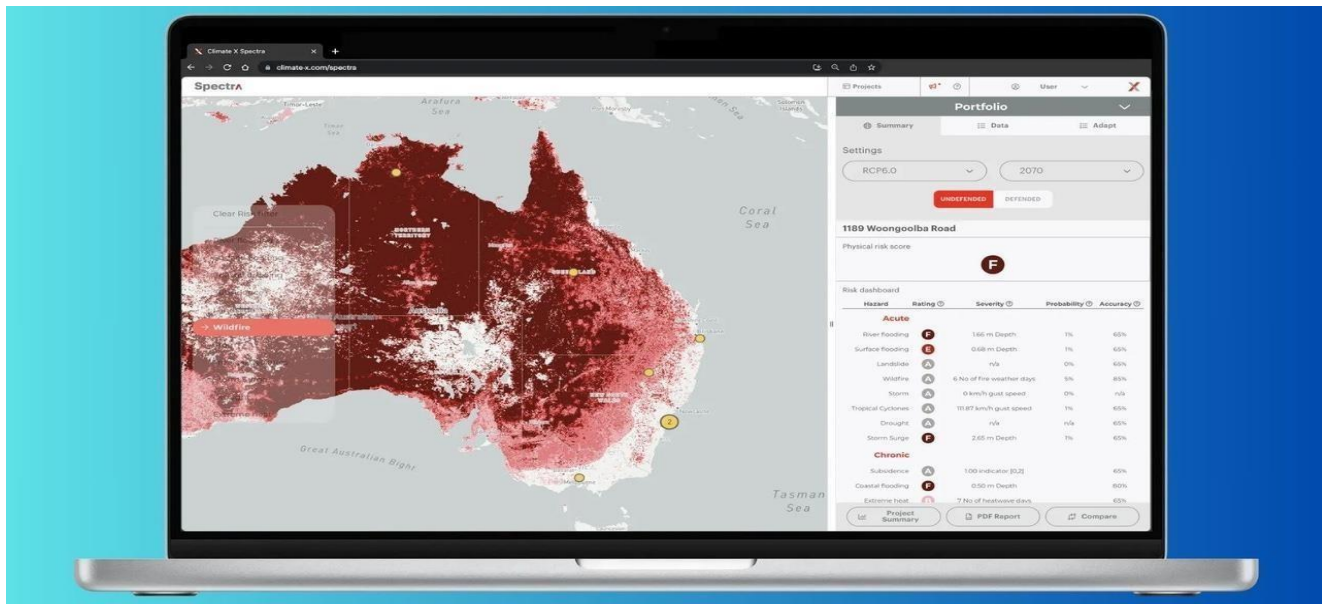
Clem Delangue, co-founder and CEO of Hugging Face, previously invested in the startup and stated that Argilla's mission aligns with that of his company.

“We can't wait to onboard the whole team to double down on datasets, which have been growing faster than models on Hugging Face and which in my opinion are the most impactful topic in AI these days,” Delangue said in a LinkedIn post.

Argilla's engineers created open source datasets and models to assist AI developers in better labeling and curating data. The startup aims to help businesses enhance their NLP applications by providing tools to tailor pre-trained models to specific use cases with improved data inputs.

Source: <https://aibusiness.com/generative-ai/verizon-nvidia-team-to-power-ai-workloads-on-5g-private-networks>

Google-Backed Climate X Raises \$18M to Expand Climate Risk Platform



London-based startup Climate X has raised \$18 million in a series A funding round to advance its climate risk analytics platform.

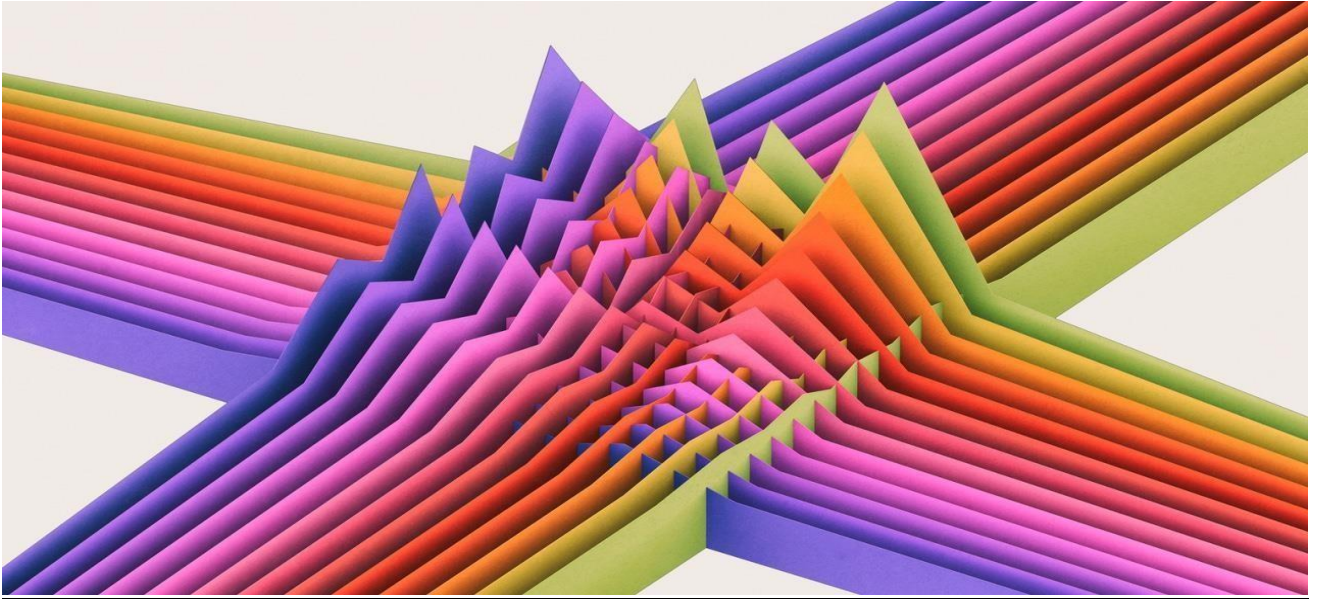
Founded in 2020, the startup provides businesses with insights into potential climate risks to their assets. Climate X's data analytics platform combines a digital twin of Earth with AI and physics tools to uncover environmental insights based on more than 500 trillion data points.

The platform allows clients to model the likelihood of 16 different climate hazards, from extreme heat to flooding, over a 100-year timeframe. The startup claims the platform is as easy to navigate as Google Maps.

Google's venture arm (GV) led the round. Pale blue dot, Blue Wire Capital and Unconventional Ventures also participated. Commerz Ventures, A/O and Western Technology Investment also joined the round. Climate X plans to use the funds to accelerate its expansion in Europe, North America and Asia.

Source: <https://aibusiness.com/generative-ai/verizon-nvidia-team-to-power-ai-workloads-on-5g-private-networks>

Department of Data Science
Gen AI is Raising the Popularity of Vector Databases



Vector databases are seeing a renewed surge of interest as generative AI takes off. Google Cloud's Andi Gutmans said vector databases can "bridge between LLMs and enterprise apps in a more seamless manner." While working at a tech startup in Germany, André Zayarni and Andrey Vasnetsov wanted to create a solution to optimize search in unstructured HR data. But there was not a tool to help with this complex process.

So Zayarni and Vasnetsov set out to build their own. They used the Rust language to create a vector database and open sourced it in May 2021.

"We received a lot of positive feedback from the community," said Zayarni. "We decided to go full into this." Growth at their startup, Qdrant, would later accelerate because of the interest in generative AI. This led to a \$28 million round of funding in January.

"We had two lead term sheets in parallel," said Zayarni. "There were also dozens of co-investment inquiries and an acquisition request."

Other vector database startups have also gained the attention of top investors, such as Pinecone. Last year, it announced a \$100 million round at a \$750 million valuation. The lead investor was Andreessen Horowitz.

Source: <https://aibusiness.com/generative-ai/verizon-nvidia-team-to-power-ai-workloads-on-5g-private-networks>

Verizon, Nvidia Team to Power AI Workloads on 5G Private Networks



Verizon and Nvidia announced they have developed a new platform the companies said represent the next phase in accelerating AI for enterprise customers.

The new 5G Private Network with Enterprise AI allows a large range of AI applications to run over Verizon's 5G private network with private Mobile Edge Compute (MEC) and combines it with Nvidia's AI enterprise software platform and Nvidia's NIM microservices to "deliver powerful, real-time AI services on premises for enterprise customers."

The AI-powered private 5G platform stack was designed to be plug-and-play and let businesses run large AI tasks on a secure, reliable private network right at their location. It offers fast speeds, high capacity and powerful computing, helping companies of all sizes achieve their goals more quickly with AI.

Source: <https://aibusiness.com/generative-ai/verizon-nvidia-team-to-power-ai-workloads-on-5g-private-networks>

Firms Not Prepared to Deploy AI Models, Report



A new Hewlett Packard Enterprise (HPE) report reveals that businesses eager to implement AI are struggling with the necessary processes required to deploy models effectively.

The report, titled Architect an AI Advantage surveyed more than 2,400 IT leaders from 14 countries. Respondents worked at organizations with more than 500 staff and spanned industries including health care, manufacturing and financial services.

HPE found that businesses looking to implement AI are struggling to perform basic processes vital for preparing data for use in AI models.

Findings showed that just 7% of the 2,400 IT professionals surveyed can currently run real-time data synchronization, while only 26% can run advanced analytics applications.

Less than 60% of respondents reported that their business is currently capable of handling functions like accessing, storing and recovering data, which could slow down a model's development process.

Source: <https://aibusiness.com/nlp/meet-claude-2-ai-rising-star-anthropic-s-latest-language-model->

Startup Raises \$46M to Revolutionize AI Dataset Curation



DatologyAI has raised \$46 million in a series A funding round to change the way companies build datasets for AI models.

Founded in September 2023, the California-based startup is building a platform that would allow businesses to automatically compile data for AI training.

Felicis Ventures led the funding round, joined by M12, Microsoft's venture capital arm, the Amazon Alexa Fund and serial tech investor Elad Gil. Existing backers including Radical Ventures and Amplify Partners also participated.

The funds will be used to hire more staff, including researchers and engineers. Datology will also increase its infrastructure to further power its platform.

“We are so grateful to our existing and new partners for their support and unwavering confidence in us as we pursue our audacious goal of democratizing data research for everyone,” said Ari

Source: <https://aibusiness.com/nlp/meet-claude-2-ai-rising-star-anthropic-s-latest-language-model->

Google, MIT's SynCLR: Model Training Using Only Synthetic Data



Researchers from Google and MIT developed a new approach to training AI image models using only synthetic data to reduce laborious dataset gathering.

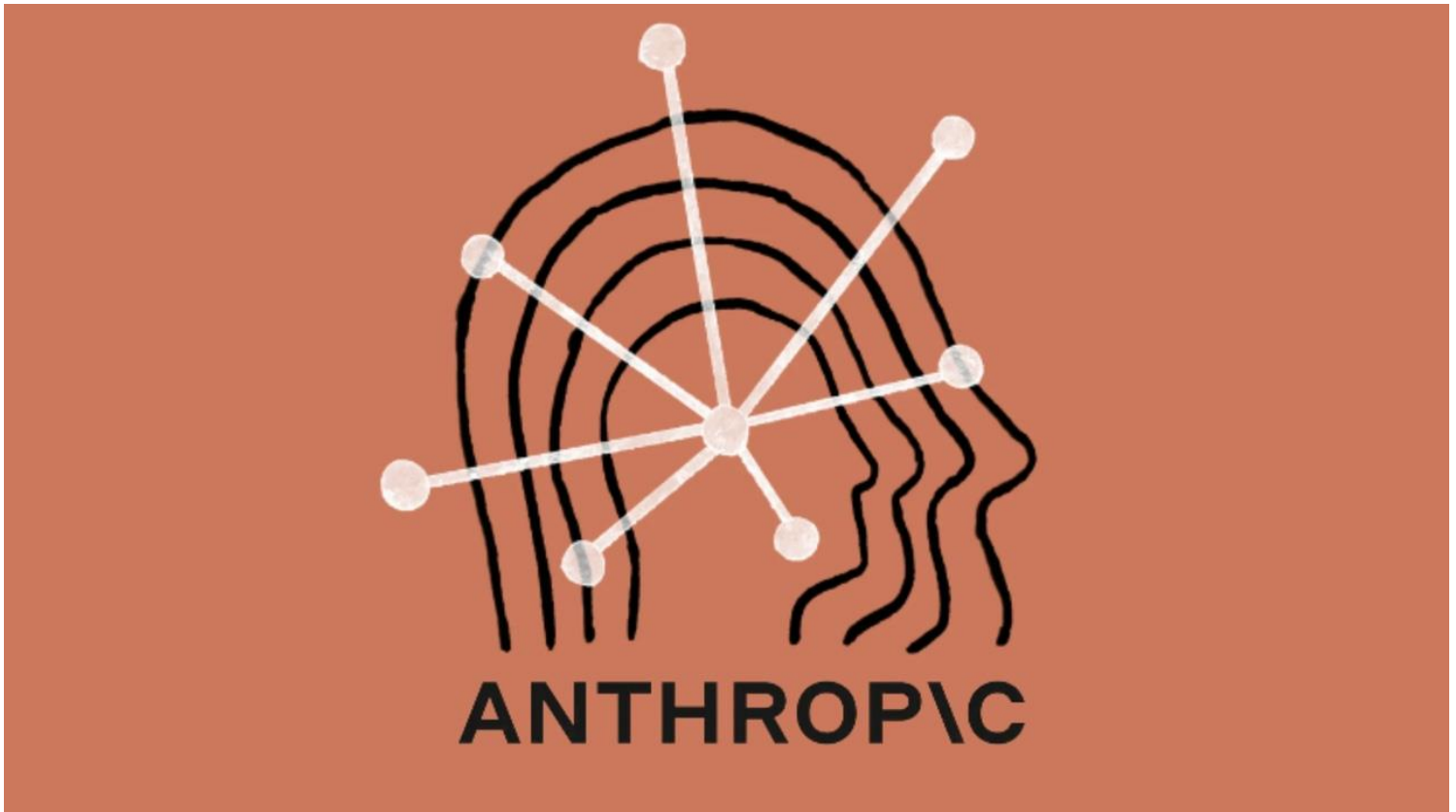
SynCLR trains the AI model to recognize visuals using only synthetic images and captions, according to a paper published recently.

The researchers used the seven billion parameter version of Meta's Llama 2 to generate image captions. OpenAI's GPT-4 was then used to create a list of suitable backgrounds for the chosen concepts in a bid to improve the plausibility of the caption scenarios.

The AI-generated captions were then compiled and used to train Stable Diffusion.

Source: <https://aibusiness.com/nlp/meet-claude-2-ai-rising-star-anthropic-s-latest-language-model->

Meet Claude 2: Enhanced ChatGPT Rival from Google-backed Anthropic



Anthropic, the Google-backed AI startup founded by former OpenAI engineers, has unveiled the next generation of its flagship large language model Claude.

Claude 2 boasts improved performance and longer responses, according to a company blog post. For the first time, Anthropic released a public-facing beta website for trying out the model, although it is only for users in the U.S. and U.K. and access has been patchy due to “capacity constraints.” It will become more globally available in the coming months.

Claude 2 builds upon the latest update to Claude, which in May expanded its ability to analyze text from 9,000 tokens to 100,000 tokens - translating to about 75,000 words or six hours of transcribed audio - in each prompt.

Source: <https://aibusiness.com/nlp/meet-claude-2-ai-rising-star-anthropic-s-latest-language-model->