



WW Public Sector

# Microsoft for Research

**Marcy Collinson**

Director, Worldwide Academic Research  
Worldwide Public Sector - Education



# Our vision for Research

Work with the research community to...  
identify industry needs, ease policy regulations & mandates, and offer solutions that will ensure data security and advanced time to scientific discovery.



# Researchers face common challenges

## Pressure to publish faster

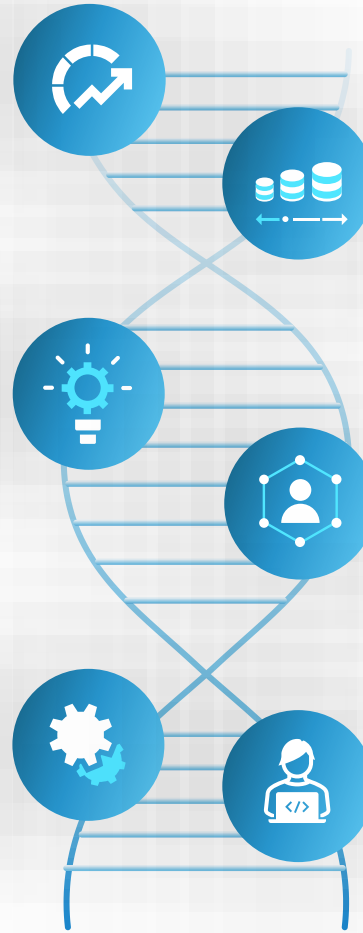
Researchers are under tremendous pressure to secure grants, conduct research, and publish quickly.

## Limited technical knowledge

Researchers are domain experts, and they don't want to become cloud experts to utilize the latest technology.

## Complicated policy and compliance processes

Funding organizations stipulate stringent policy and compliance needs, but researchers must find tools and resources to comply.



## Difficulty accessing adequate computing resources

Researchers often rely on personal workstations, on-campus or governmental resources to work with large datasets. Wait times can be lengthy or limited.

## Cross-institutional collaboration difficulties

Researchers have collaboration challenges inter-institutionally, as well as with other institutions or entities.

## Friction between Central IT and Researchers

Researchers seek flexibility to drive innovation, while IT must balance organizational policies, budgets, and infrastructure limits.

# Holistic view of supporting Research

## Our current focus areas



Microsoft  
Research  
Communities



Third-party  
research programs



Research-focused  
offerings  
and skilling



Products and  
solutions for  
Research



Strategic  
partnerships and  
multi-industry  
engagements

# Microsoft Academic Research Exchange



## Microsoft Academic Research Exchange



### Details

**The Microsoft Academic Research Exchange** is a monthly global webinar series designed to foster open dialogue and knowledge sharing across the academic research community. Each session highlights real-world research applications, interdisciplinary collaboration, and emerging methodologies—creating space for researchers, institutions, and partners to exchange insights, explore challenges, and accelerate discovery together.

- **Research customers**
- **Research partners**
- **Strategic alliances**

Follow this series by joining the **Microsoft Azure for Academic Research** LinkedIn community!

# Participating in 3<sup>rd</sup> party research programs

## National Institutes of Health (NIH) STRIDES

- Supports biomedical research initiatives
- Researchers and institutions can accelerate processing, storage, analysis, and sharing of datasets and complex workloads
- Special pricing on advanced cloud technology.

## National Science Foundation (NSF) NAIRR

- Accelerate AI and AI-powered discovery and innovation.
- Expand the AI workforce and train the next generation of AI researchers and educators.
- Increase capacity, integration and use of world-class public and private-sector AI resources.
- Advance AI interpretability, security and trust.

## National Research and Education Networks (NRENs): GÉANT OCRE and Internet2

- Significant discounts on Microsoft Azure services.
- Access to powerful research tools and service agreements.
- A centralized procurement body, available to 10k GÉANT members in 40 countries.



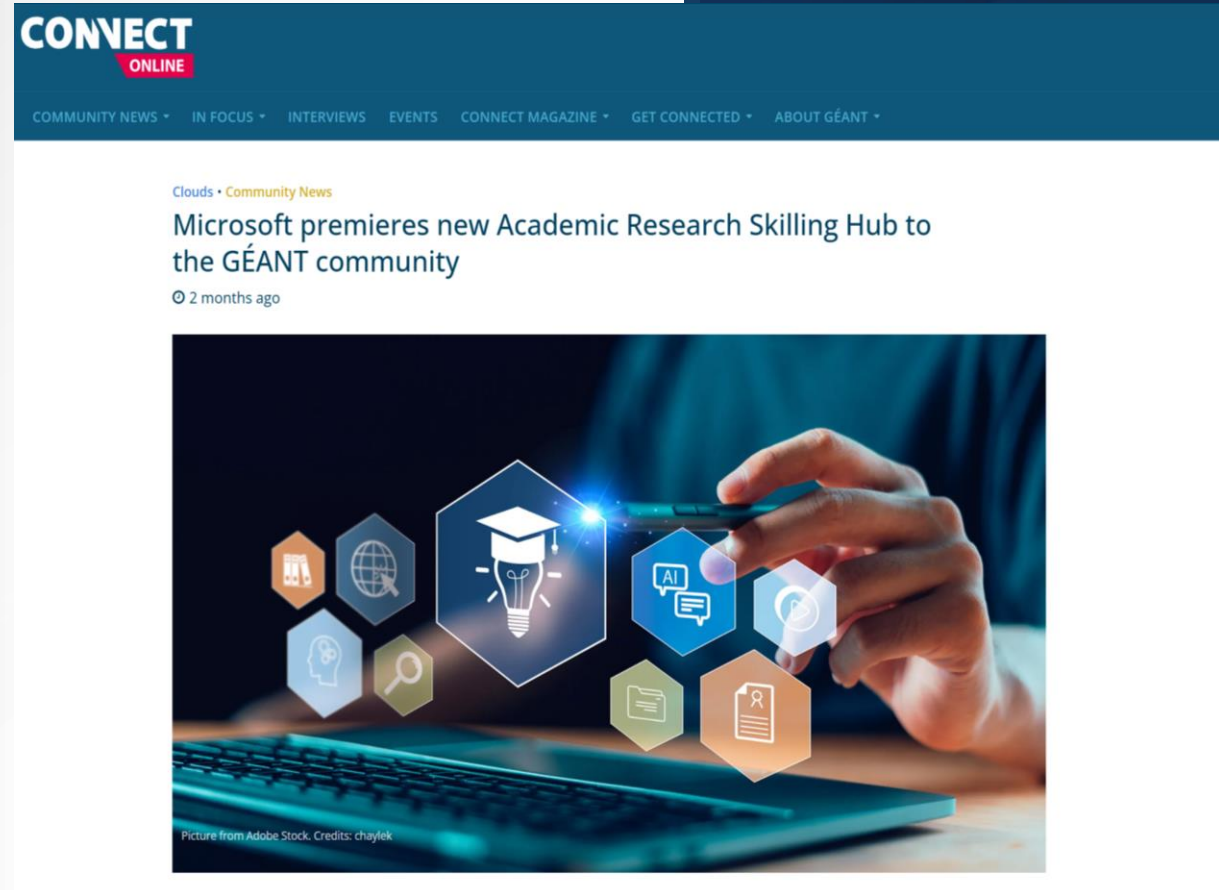
# Research-focused skilling

## Research-focused Skilling

- **Microsoft Research Skilling Hub**
- Premiered through GEANT OCRE
- Skilling collections for researchers and research IT staff
- Industry-recognized Certifications
- Instructor-led training – general IT and research specific
- Additional resources – Azure, AI, & Agents

## Third party researcher skilling programs

Working through the GÉANT Open Clouds for Research Environments (OCRE) framework in Europe to strengthen Microsoft's stance with the research community and on skilling opportunities for individual researchers and educational IT.



The image is a screenshot of the 'CONNECT ONLINE' website. The header is dark blue with the 'CONNECT ONLINE' logo in white and red. Below the header is a navigation menu with links: 'COMMUNITY NEWS', 'IN FOCUS', 'INTERVIEWS', 'EVENTS', 'CONNECT MAGAZINE', 'GET CONNECTED', and 'ABOUT GÉANT'. The main content area features a news article titled 'Microsoft premieres new Academic Research Skilling Hub to the GÉANT community', dated '2 months ago'. The article is accompanied by a large image of a hand holding a smartphone, with several glowing hexagonal icons floating around it. These icons represent various concepts: a graduation cap, a lightbulb, a globe, a magnifying glass, a document, a person, and a gear. The background of the image is a blurred laptop keyboard.

CONNECT  
ONLINE

COMMUNITY NEWS • IN FOCUS • INTERVIEWS • EVENTS • CONNECT MAGAZINE • GET CONNECTED • ABOUT GÉANT •

Clouds • Community News

Microsoft premieres new Academic Research Skilling Hub to the GÉANT community

2 months ago

Picture from Adobe Stock. Credits: chayfek

# Academic Research Skilling


A place for academic researchers and research IT professionals to explore what is possible with Microsoft tools. This hub brings together practical insights, evolving capabilities, and a shared focus on advancing academic work through thoughtful technology.

## Azure and AI training for academic research teams

Explore tailored Microsoft training collections designed to empower academic researchers and IT staff with cloud, AI, and infrastructure skills. From optimizing virtual machines and securing data to building ethical AI applications, these resources support innovative research and smart campus solutions.

### How can cloud technology elevate my research?

This learning path is for researchers looking to optimize data workflows, boost efficiency, and unlock the power of HPC.

 [Azure Fundamentals for Academic Researchers](#)

### Supporting research with secure, scalable cloud technology?

This collection offers targeted training to help campus IT teams manage infrastructure, boost performance, and drive innovation.

 [Computing on Azure for Academic Research IT Staff](#)

### Ready to dive into AI and machine learning?

This collection offers essential training to help researchers and IT staff build smart, ethical, and scalable AI and ML applications.

 [Artificial Intelligence and Machine Learning Basics for Academic Research and Research IT Staff](#)

# Additional Research communities need skilling support

## **Data Management and Sharing Policies (DMSPs/DMPs):**

- Plan during the solicitation phase of project
- How data will be stored
- How data will be shared
- Regular reporting back to the funding entity
- If non-compliant, funding entity can revoke or blacklist research/institute for future funding

**Research Software Engineers (RSEs)** and **Librarians** are becoming data stewards and need support.



# Data and AI skills needed to advance research capabilities

The RDA–Microsoft research roundtables on Data and AI were held in May 2025 and attracted a globally representative and highly diverse group of stakeholders from 20 countries across six continents.

## Americas, Europe and Africa session



## Asia and Oceania session



# Microsoft products for Research

## Azure Services for Research



Compute VMs



HPC



Storage



HLS



Analytics / Fabric



IoT



Research is a vital discipline because it drives innovation and progress, helps solve big societal problems, and deepens our understanding of the world around us.



**University of Bath** researchers test theories and release findings faster than before. <sup>1</sup>



**University of Washington** with Microsoft Research use computer science in precision agriculture make farms more efficient and reduce climate change. <sup>2</sup>



**Duke Health's** medical researchers work with the massive amounts of patient data generated to support innovative research related to computer vision and medical imaging. <sup>3</sup>



**San Raffaele University and Research Hospital** transform clinical research, improve the end-to-end patient journey inside the hospital and accelerate its own move towards precision medicine. <sup>4</sup>






**North Carolina Plant Sciences Initiative** is using faster and more efficient data management to tackle some of agriculture's biggest challenges. <sup>5</sup>



**Oregon State University** advances its research areas with more compliant and more secure data management capabilities. <sup>6</sup>




# Microsoft technologies used to support these research projects and initiatives.

-  Azure Cloud Services
-  Azure Databricks
-  Azure Machine Learning





**University of Bath** researchers test theories and release findings faster than before. <sup>1</sup>

-  Azure Cloud Services
-  Azure IoT
-  Microsoft Teams

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-  Azure Cloud Services
-  Azure AI Services
-  Azure Machine Learning

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-  Azure AI Services
-  Azure Virtual Machines
-  Azure Machine Learning
-  Intelligent Data Platform

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-  Azure Cloud Services
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-  Azure Cloud Services
-  Microsoft Teams
-  Power BI
-  Microsoft 365
-  Microsoft Entra ID

**Oregon State University** advances its research areas with more compliant and more secure data management capabilities. <sup>6</sup>

# HPC - CycleCloud




- Create an HPC cluster in the cloud
  - Per department, research group or even researcher – eliminate queuing
- Configurable to be a familiar interface to on-prem
  - Select your preferred scheduler: Slurm, PBSpro, etc...
    - Azure CycleCloud Workspace for Slurm – rapid templated AI HPC deployment
- Fully autoscaling
  - Compute nodes spin up as jobs request them and spin down when not in use
  - Only pay for what you use
- InfiniBand RDMA-enabled compute nodes available
  - Finite element analysis, computational fluid dynamics, climate modelling etc...


Need to run a large model to get results before a conference but can't wait in a queue?


How many parameter spaces would you *like* to explore and what can you do now?


How many more time steps could you run or what time resolution could you reach with 2, 5, 10 or 100x more nodes?

## Sustainability

- **Carbon negative**

By 2030, we'll be carbon negative, and by 2050, we'll remove our historical emissions since our founding in 1975.
- **Water positive**

By 2030, we'll replenish more water than we consume across our direct operations.
- **Protect and preserve ecosystems**

We'll protect more land than we use by 2025 and build a Planetary Computer.
- **Zero waste**

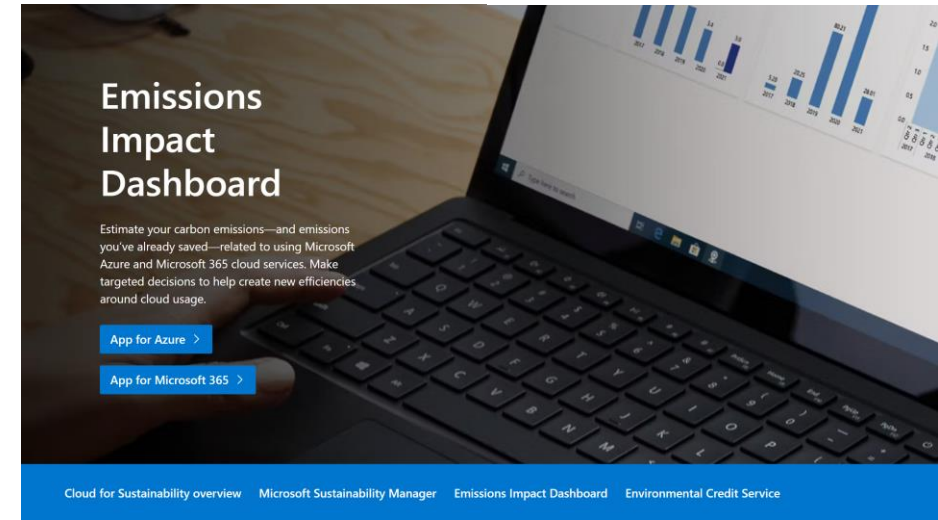
By 2030, we'll be zero waste across our direct waste footprint.

72-98% more CO<sub>2</sub> efficient than traditional on-prem facilities

# Environment & Sustainability Resources



- [Microsoft Sustainability Hub](#)
- [Emissions Impact Dashboard](#)
  - Per customer for both Azure and Copilot 365
    - Estimate avoided emissions
    - Scope3/indirect emissions
- [Microsoft's sustainability commitments](#)
  - Decentralization of data is necessary for optimal scientific advancement
- [2025 Environmental Sustainability Report](#)
  - 1 per financial year, typically released in early summer
- **New VM and AI accelerator chips** built by Microsoft with sustainable AI in mind for reduced power consumption and cooling





# Trusted/Secure Research Environments (TREs/SREs)



CyberCX: Nebula

A Sovereign cloud platform which will secure, facilitate and accelerate sensitive research.



Terawe: ManageX

Dedicated Secure Research Enclave made available for researchers to use in a secure manner while working on restricted data sets.



BizData: Loom

Loom streamlines data-driven decision-making by offering self-service research tools, a unified analytics portal, efficient data orchestration, and real-time alerts.



Parallel Works: Activate

The HPC & AI control plane to access, manage, and configure computing resources.

# Microsoft Azure compliance meets stringent requirements

The largest government compliance portfolio in the industry

## Global



## Regional



## Industry



## US Gov



# Microsoft products for Research

## Microsoft AI Offerings

AI

### AI for Research



#### Azure Machine Learning

- Train and deploy ML models
- Bring your own data and data science skills



#### Azure AI Services

- Prebuilt AI models for many use cases
- Customizable models using own data

### GenAI Development



#### Azure AI Foundry

- Pro-code Gen AI app building platform
- Access to a range of models



#### Azure OpenAI

- Data models integrated in apps
- NLP use cases and access to embeddings

### DYI AI Deployment



#### Azure Kubernetes Service and Azure VMs

- Bring own AI models to run on Azure
- Use containers with orchestration or deploy on a single VM



# Microsoft products for Research

## Microsoft Copilot capabilities



Copilot in Bing Chat



Copilots for Web

Copilot for M365



Copilot for Productivity

Copilot in Windows



Copilot for Everyday

Designer



Copilot for Creativity

Azure



Copilot for Cloud

Fabric Copilot



Copilots for Analytics

Copilot Studio



Extend your Copilot for M365

Power Platform



Copilot for Low/No Code Development

Power BI



Copilot for Dashboard

Security Copilot



Copilot for Security

Dragon Copilot



HLS AI Platform

Custom Copilot



AI Platform

Dynamics Copilot



Copilots for Business

GitHub Copilot



Copilot for Development

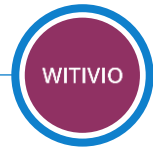


# A Day in the Life of a Researcher with Microsoft Copilot



# Advanced Copilot capabilities for Research

## Copilot for Researcher by Witivio



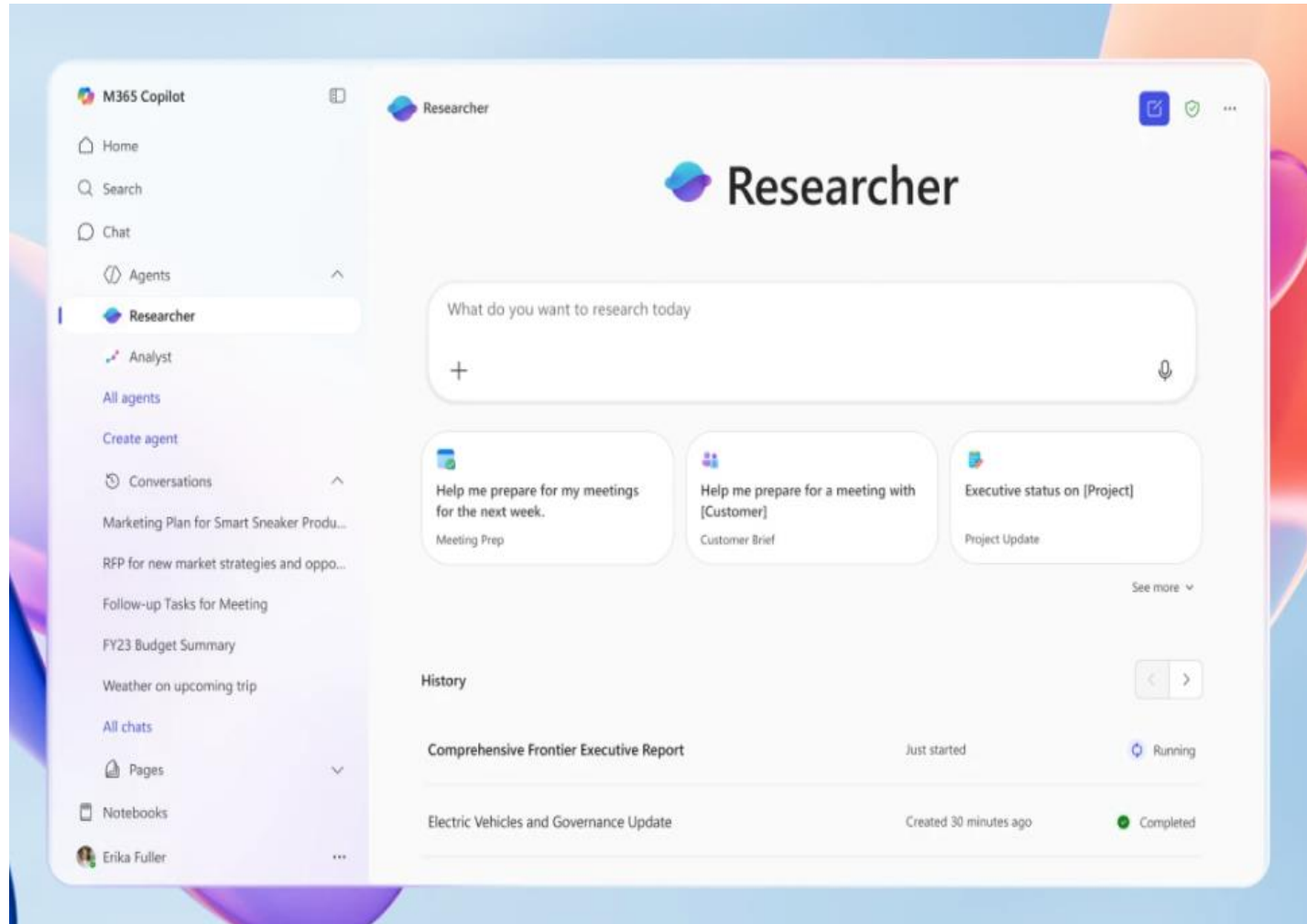
Specialized Copilot agent designed for discovery and functionality within the healthcare and life sciences community.

- Quickly identify relevant studies / publications
- Simplify clinical trial searches
- Automatically adjust manuscripts to fit journal requirements



# Researcher and Analyst agents are available in Microsoft 365 Copilot

- Reasoning agents that can accommodate research scenarios.
- **Researcher** combines OpenAI's deep research model with Microsoft 365 Copilot's advanced orchestration & search capabilities.
- **Analyst** uses chain-of-thought reasoning to progress through problems iteratively (like a data scientist) taking you from raw data to insights in minutes.



# M365 Copilot Agents – Out of the Box



  
Microsoft 365  
Copilot

Researcher



# M365 Copilot Agents - Analyst



# Analyst



# Microsoft Discovery

## Chemistry

New compounds  
and materials

## Life Sciences

AI-driven  
drug discovery

## Physics

Semiconductors and multi-  
physics systems development

## Others

Platform approach for  
new science verticals

## Science Platform

Copilot for Science

•

Graph-based reasoning

•

Agent orchestration

•

Science ecosystem

## Azure Infrastructure

### AI

Azure OpenAI  
Azure AI Foundry

### Compute

Azure HPC  
Quantum

### Data

Microsoft Fabric  
Azure Purview

- Home
- Workspaces
- Projects
- Catalog**
- Tool Definitions
- Model Definitions
- Knowledge Base Definitions
- Agent Definitions
- Resources**
- Tools
- Models
- Knowledge Bases
- Agents
- Data Containers

Workspaces > Immersion Cooling Research > PFAS - Free Coolant Discovery > Sat afternoon Tab 1b

# Microsoft Discovery

Try these prompts [Catch up](#)

## Compute Single Point Energy

Compute the Single Point Energy (SPE) for Caffeine

## Predict IR spectrum

Predict the IR spectrum of benzene in Boltzman distribution?

## Lowest energy conformer

Get the lowest energy conformer of the R-134a refrigerant?

## Vibrational frequencies

Calculate the vibrational frequencies of water using quantum chemistry methods.

## Simulate NMR spectrum

Simulate the NMR spectrum of ethanol.

## Predict UV-Vis spectrum

Predict the UV-Vis spectrum of a given dye molecule.

I want to identify novel immersion coolants for data centers focusing on minimizing electricity consumption and that are not harmful for the environment.

What would be known molecules that could be used as seeds to identify new ones?

Create a report on the latest research in this domain and the key properties they should meet.

329 / 2000



- 
- 
3. Critical Temperature > 140C
4. Dielectric constant < 6

## Agent logs ^

- > **ChemistryAgent** 5/9/2025, 6:52:05 PM
- > **GenChemAgent** 5/9/2025, 6:52:17 PM
- > **ChemistryAgent** 5/9/2025, 6:52:19 PM
- > **RegulatoryComplianceAgent** 5/9/2025, 6:52:27 PM
- > **ChemistryAgent** 5/9/2025, 6:52:28 PM
- > **MolPredictorAgent** 5/9/2025, 6:52:55 PM
- > **ChemistryAgent** 5/9/2025, 6:52:57 PM
- > **ADFTAgent** 5/9/2025, 6:53:02 PM
- > **ChemistryAgent** 5/9/2025, 6:53:03 PM
- > **CorePythonScienceToolsAgent** 5/9/2025, 6:53:20 PM
- > **ChemistryAgent** 5/9/2025, 6:53:21 PM
- > **ADFTAgent** 5/9/2025, 10:43:49 PM

Message Copilot

0 / 2000

AI-generated content may be incorrect

Centers to run cooler and greener in the coming years.

## 2. Key Properties for Immersion Coolants (Minimizing Energy Use)

Designing or selecting an immersion cooling fluid that **minimizes electricity consumption** requires balancing multiple thermophysical and safety properties. Below we identify the **key properties** an ideal coolant should have, and how each property impacts data center efficiency:

- **High Heat Capacity & Thermal Conductivity:** *Heat capacity* (specific heat) determines how much heat the fluid can absorb per unit mass (or volume) for a given temperature rise, and *thermal conductivity* determines how easily heat spreads through the fluid. **Higher values are better** for both -- they enable efficient heat transfer from hot components to the bulk fluid. A coolant with high specific heat can carry more thermal energy away, reducing the flow rate needed and thus lowering pump power. For example, a typical hydrocarbon oil has a specific heat  $\sim 2.3$  kJ/kg-K and thermal conductivity  $\sim 0.142$  W/m-K<sup>1</sup>, which are relatively high compared to dense fluorinated fluids (fluorocarbon liquids often have  $\sim 1.1$  kJ/kg-K,  $0.10$ -- $0.11$  W/m-K)<sup>1</sup>. In practice, **greater heat capacity means fewer circulation cycles** to remove heat, directly cutting down on pumping or fan energy.
- **Low Viscosity:** Viscosity influences how easily the fluid flows. A **lower viscosity** is crucial to minimize pumping power in single-phase systems (and also helps natural convection currents form in passive two-phase systems). Lower viscosity fluids face less friction in pipes and heat exchangers, so pumps consume less electricity to move them. For instance, at 40°C a typical mineral oil coolant might have  $\sim 9.8$  mm<sup>2</sup>/s (cSt) viscosity, whereas a fluorinated fluid can be as low as **0.36 cSt** (for a light two-phase fluid)<sup>1</sup>. Thus, the fluorinated fluid flows  $\sim 27$  times more easily, indicating **much less energy** is needed to circulate it. Achieving water-like or better viscosity ( $< 1$ -- $2$  cSt) is often a target for new synthetic coolants<sup>1</sup>. *Note:* Two-phase immersion largely bypasses this concern because **boiling action replaces pumping** -- vapor rises naturally and gravity returns the condensate<sup>1</sup>. This is a major reason two-phase systems can nearly eliminate pump electricity use.
- **Appropriate Boiling Point:** This property is relevant mainly for two-phase coolants. The boiling point must be **low enough to boil at safe component temperatures** but high enough to avoid excessive evaporation losses. An ideal two-phase coolant might boil in the range of  $\sim 40$ -- $60$ °C, so that chips can operate in that range and any boiling can be condensed with facility water loops. For example, 3M's Novec 649 (a fluoroketone) boils at  $\sim 49$ °C [5], and Chemours' new HFO coolant boils at  $\sim 50$ °C (as implied by its name 2P50). In contrast, single-phase fluids are chosen with **very high boiling points** (e.g. mineral oil  $\sim 285$ °C<sup>1</sup>) to ensure they stay liquid; thus, boiling point is less critical for them except to indicate thermal limits. The **boiling point directly impacts energy efficiency**: a fluid that boils in the target range will carry away latent heat, allowing **heat removal with no pumping and at a nearly constant temperature** (which can improve chip efficiency and reduce thermal cycling). If the boiling point is too low (e.g.  $< 30$ °C), the fluid may boil off too easily, requiring pressurization or causing cooling inefficiency; too high, and it won't boil at all, forfeiting the benefits of phase change. Therefore, tuning this property is essential for two-phase system energy optimization.
- **High Dielectric Strength & Electrical Resistivity:** Since electronics are directly immersed, the fluid must be an excellent electrical insulator. **High dielectric strength** (withstand high voltages without breakdown) and **high resistivity** prevent any current leakage or short-circuit. While these don't directly reduce cooling energy, they are



Copilot

I have created a comprehensive report on the latest research into novel immersion coolants for data centers, focusing on minimizing electricity consumption and ensuring environmental safety. The report highlights the following key points:

1. **Latest Advancements:** Immersion cooling, particularly two-phase immersion cooling, is gaining traction due to its superior energy efficiency compared to traditional air cooling methods.
2. **Key Coolant Properties:** Ideal coolants should possess high heat capacity, low viscosity, an appropriate boiling point, high dielectric strength, thermal stability, and non-flammability to ensure efficient and safe operation.
3. **PFAS Concerns:** PFAS-based coolants are being phased out due to their environmental persistence and associated health risks.
4. **Alternatives to PFAS:** Promising alternatives include hydrocarbon oils, synthetic esters, hydrofluoroethers (HFEs), and hydrofluoroolefins (HFOs). HFOs, such as Chemours Opteon 2P50, are particularly noteworthy for their low global warming potential and non-persistence.
5. **Future Trends:** The report anticipates the widespread adoption of immersion cooling, the complete phase-out of PFAS, and the development of hybrid cooling systems and sustainable fluids. AI is expected to play a significant role in discovering and optimizing new coolants.
6. **Generative Models for Coolant Design:** Known coolant molecules are being used as seeds in generative AI models to design new fluids that balance performance, safety, and environmental impact.

The report has been saved to the data asset named **coolant\_report**. If you'd like to review the full report or need further assistance, feel free to let me know!

coolant\_report.json

Copy

Stop Execution

Message Copilot

0 / 2000

AI-generated content may be incorrect

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# Research focal areas

1010  
1010

## AI Data

Powerful foundation for training and testing AI models helps researchers identify patterns, make predictions, simulate experiments, and uncover insights that might be impossible for humans to detect alone.



## Data Readiness and Data-Centric AI

As research increasingly relies on advanced methods like AI, machine learning, and big data analytics, researchers must develop new skills to ensure they stay relevant and competitive.



## HPC to Quantum Readiness

Quantum computing has the potential to solve problems that are currently infeasible for classical HPC systems. Preparing for this shift ensures that researchers can integrate quantum capabilities into existing workflows.

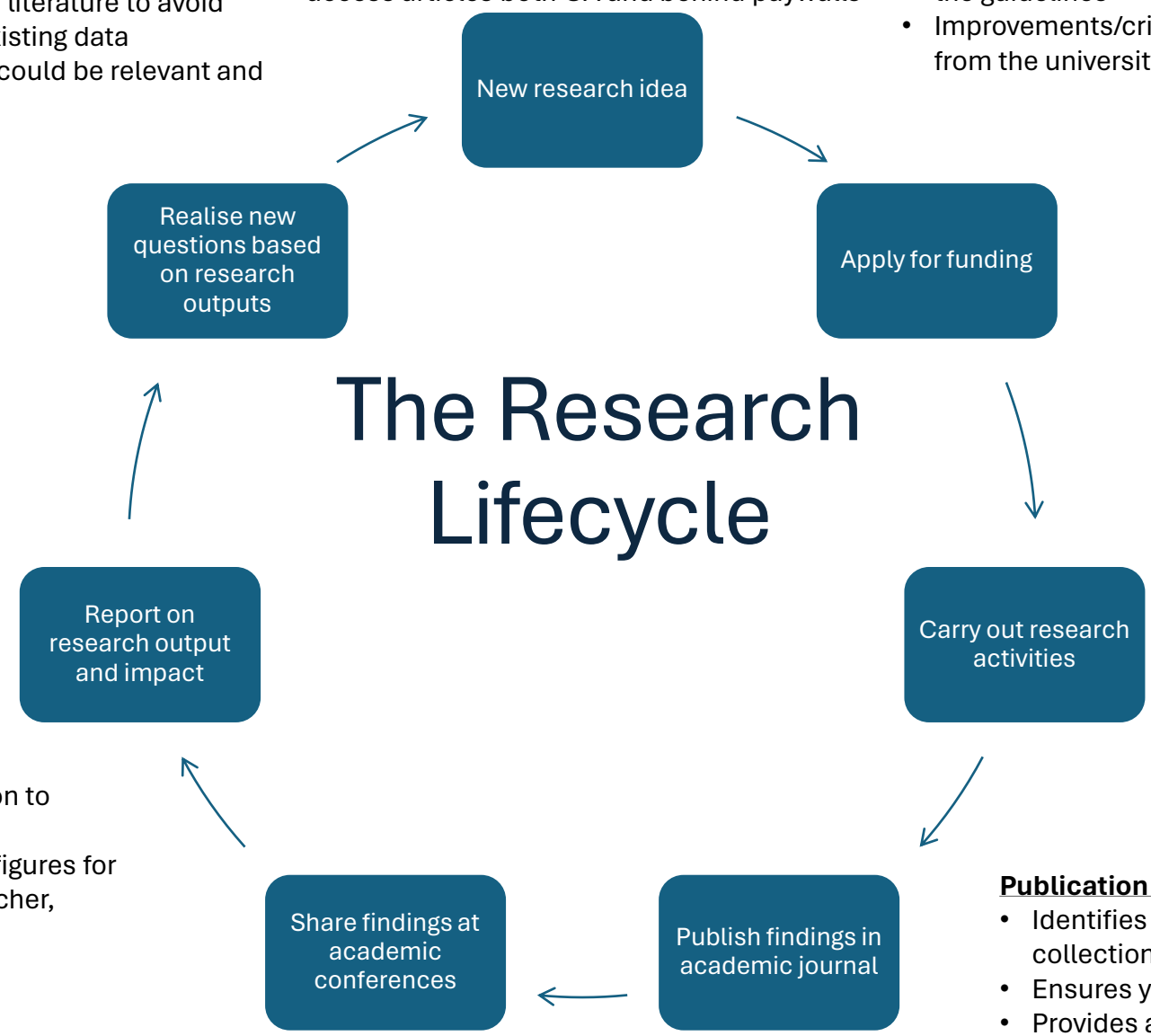


## RDA and Microsoft Whitepapers

- RDA and Microsoft White Paper: Data Readiness and Data-Centric AI

- RDA and Microsoft White Paper: From HPC to Quantum - Shaping the Future of Research Computing

# The Research Lifecycle



## Literature Librarian

- Natural language literature searching
- Integration with library subscriptions to access articles both OA and behind paywalls

## Funding Finder

- Scan funding databases to match calls with your ideas
- Provides the template for your application and ensures you meet the guidelines
- Improvements/critiquing based on prior successful applications from the university

## Ethics Reviewer

- Offers potential ethical issues for project proposals
- Provides guidance on meeting ethics requirements based on guidelines and prior ethics board decisions

## Resource Finder

- Takes a researcher's goals and surfaces university services available to help
- Linked to lab facilities, IT infrastructure, RSEs, seminar groups, internal funding, etc...

## Collaboration Catalyst

- Suggests internal colleagues to work with on specific challenges based on their profiles
- Surfaces dataset and facility owners who could collaborate on a project idea

## Publication Preparer

- Identifies appropriate journals and special collections for your work
- Ensures your work is in scope, reducing rejection rate
- Provides appropriate journal templates and rewrites content to meet guidelines
- Generate evidenced novelty statements for editors

## Literature/Data Wrangler

- Scan the literature for gaps in knowledge/research
- Identify overlap of ideas with the literature to avoid repetition/encourage reuse of existing data
- Identify internal datasets which could be relevant and useful for a new project

## REF Support

- Researchers: taking information and preparing it into an appropriate format template
- Institution: collecting information from researchers and preparing it to a REF template

## Research Reporter

- Population of Researchfish/new solution based on provided information

## Research Refiner

- Critical discussion of data presentation to improve communication quality
- Translation of research literature and figures for a specified audience – domain researcher, broad researcher or public

## Data Director

- Automatic metadata creation, ensuring [FAIR](#) and [FAIR2](#) principles are followed
- DOI minting
- Provides guidance on where the data should be stored to be compliant

# Global Community Priorities for Agentic AI in Research

Four **virtual sessions** were held November 2025 to accommodate different time zones. Sessions attracted 190 registrants and 70 participants representing **33 countries** from **6 continents**. An **anonymous survey**, open throughout November, captured wide ranging community insights, perspectives and priorities for agentic AI in research. **83 complete responses from 25 countries across 5 continents.**



## Literature Librarian

would search literature using natural language queries integrated with library subscriptions



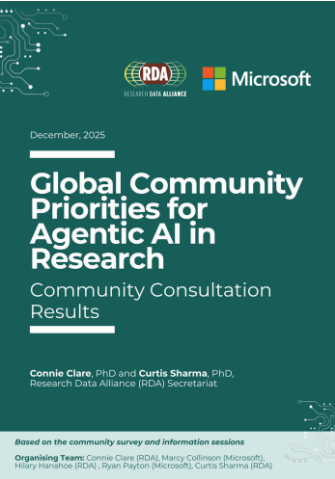
## Data Director

designed to support research data preparation and sharing in compliance with FAIR principles



## Funding Finder

which would identify relevant funding opportunities and support application processes.



## RDA and Microsoft continued partnership

- **“What is Agentic AI”**
  - Sessions held at the RDA Plenary events in March 2026
- RDA and Microsoft Blueprinting/Architecture Working Group will be launched in April

# What is Generative AI?

## Artificial Intelligence

Is the field of study

## Machine Learning

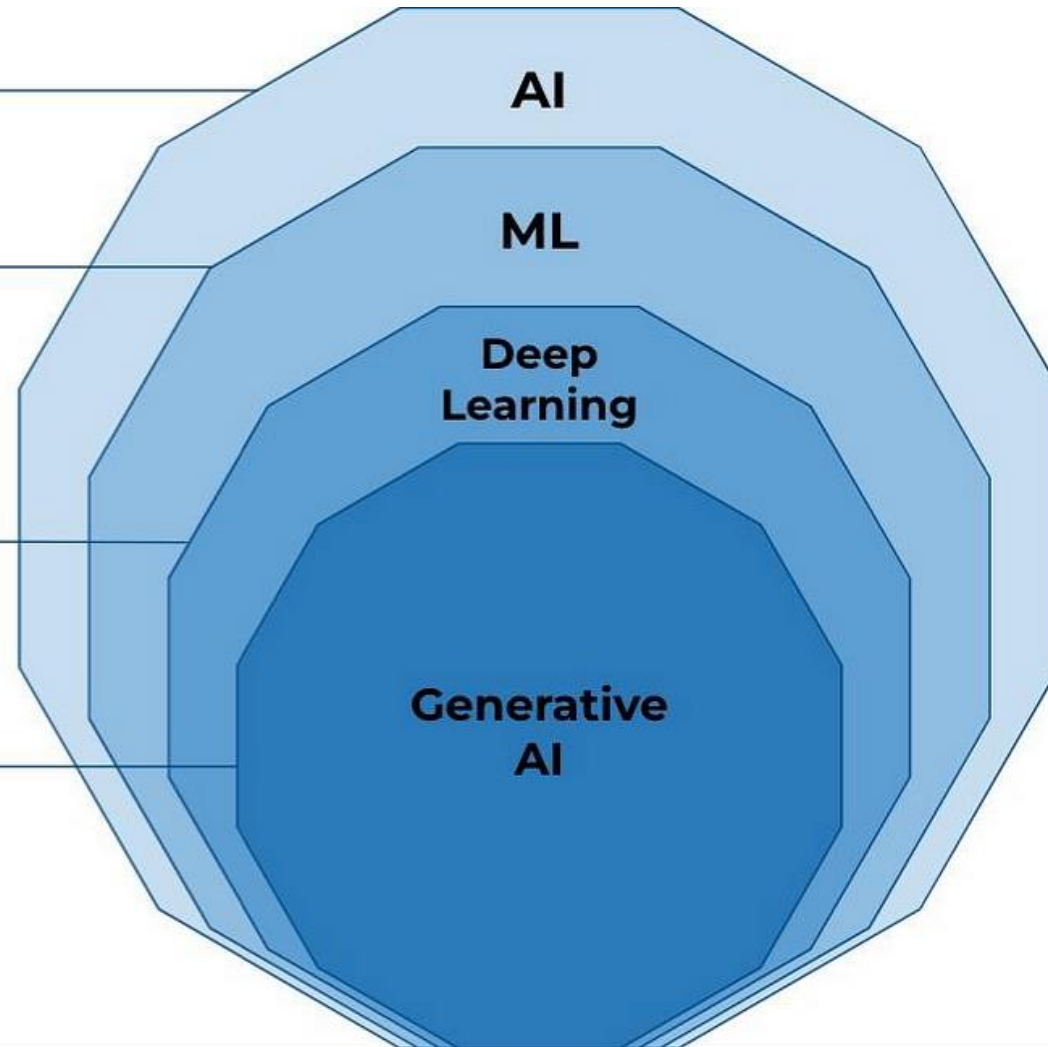
Is a branch of AI that focus on the creation of intelligent machines that learn from data. Another very well know branch inside AI is **Optimization**.

## Deep Learning

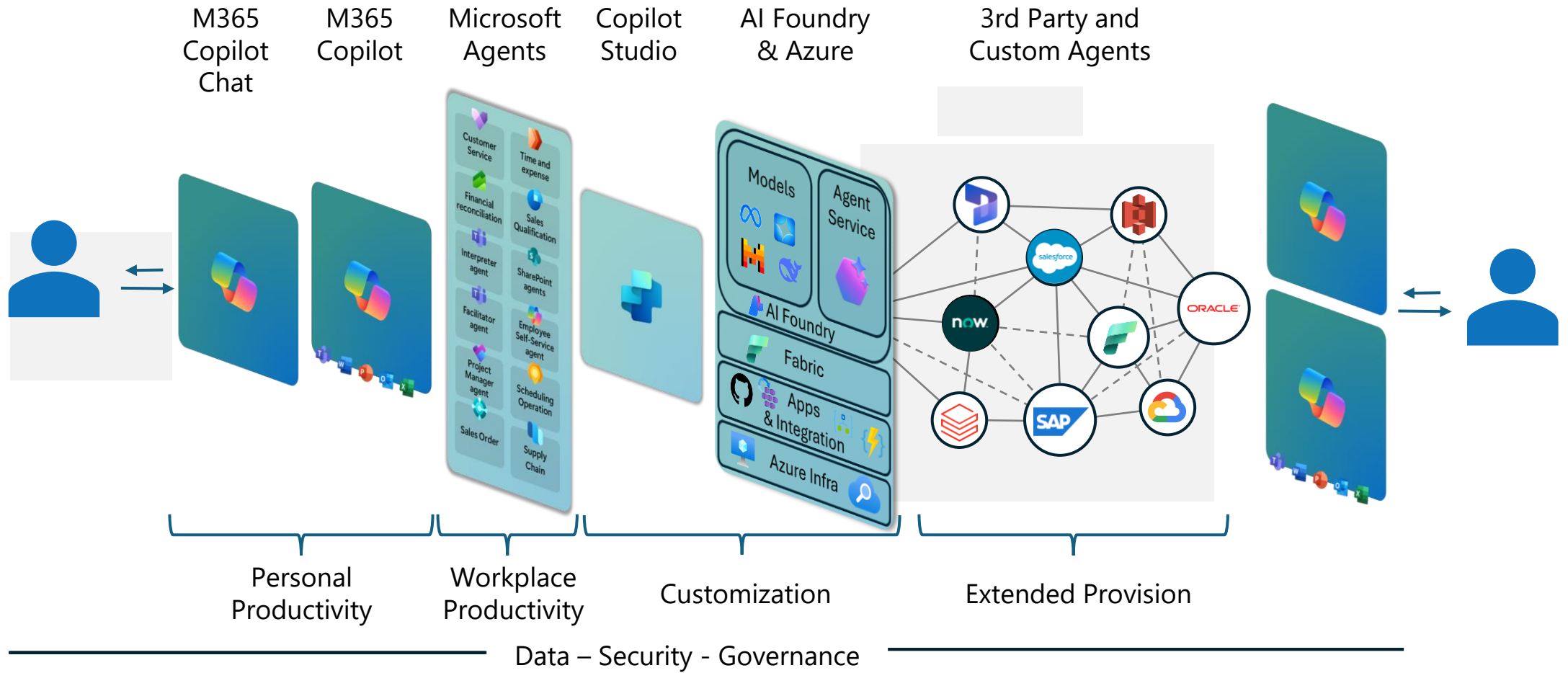
Is a subset of Machine Learning methods, based on **Artificial Neural Networks**.  
Examples: CNNs, RNNs

## Generative AI

A type of ANNs that generate data that is similar to the data it was trained on.  
Examples: GANs, LLMs



# Connecting it all Together – Agentic AI



# Microsoft Research Fellowship

The Microsoft Research Fellowship creates opportunities for academic scholars (faculty, PhD students, and postdocs) to collaborate with Microsoft Research on open research challenges that advance scientific understanding, drive innovation, and deliver societal benefit.



Microsoft Research  
Fellowship

## Researcher-Microsoft Collaboration Breakthroughs:

- Majorana 1: The world's first quantum processor powered by topological qubits
- BioEmu-1: Faster protein stability predictions could lead to more effective medicines
- MatterGen and MatterSim: AI-powered breakthroughs in materials discovery
- RAD-DINO: X-ray data meets AI technology
- Aurora: Advanced atmospheric and weather forecasting
- FCDD: Improving early breast cancer screening with AI
- Seaweed-infused cement could cut concrete's carbon footprint
- Mapping floods from space — even when clouds get in the way
- Analog optical computer: Accelerating AI and optimization with light
- Managing the risk behind the promise of AI in biology

## Microsoft Research Article:

*What's Next in AI: 7 Trends to watch in 2026*

**Proposal deadline:  
March 31, 2026**

# AI Economy Institute

Launched in 2025, Microsoft's AI Economy Institute (AIEI) supports independent, policy-relevant research on how artificial intelligence is reshaping productivity, labor markets, education systems, and economic opportunity, worldwide. AIEI advances rigorous scholarship that informs policymakers, educators, employers, and workers as societies adapt to the rapid diffusion of generative AI. The institute emphasizes scholarship that is immediately translatable to policy, decision-making, and investment.

## Cohort 3: Research focus

### **AIEI 3<sup>rd</sup> CFP: Frontier Firms and the Transformation of Work in the AI Economy**

The Microsoft AI Economy Institute (AIEI) invites proposals for its third global research call, centered on understanding how frontier firms – those firms adopting and deploying AI at scale – are reshaping the organization of work and the broader economic landscape.



### **Priority research themes**

- > Productivity at the Frontier and Firm-Level Transformation: How AI Is Reshaping Production and Organizational Design
- > Occupational Change, Leadership Expectation, and Workforce Transformation
- > Economic Geography and Diffusion: Regional and Market Level Spillovers
- > When History Rhymes: GPT Analogues and Structural Shifts
- > Forecasting the Frontier: Capabilities, Diffusion, and Labor Market Signals



## 13th Africa–Europe Science Collaboration Forum: Empowering Innovation for a Sustainable Shared Future

The Africa–Europe Science Collaboration Platform (AERAP) will convene its 13th Annual Forum in Brussels from 20 to 23 April 2026, bringing together policymakers, scientists, investors, and international organisations to strengthen the strategic partnership between Africa and Europe through science, technology, and innovation.

### **DATE**

Apr 20 - 23 2026

### **TIME** *CET*

9:00 am - 5:30 pm

### **LOCAL TIME**

Timezone: Europe/Brussels

Date: Apr 20 - 23 2026

Time: 9:00 am - 5:30 pm

### **COST**

Free


### **LABELS**


Hybrid event

### **LOCATION**

Brussels, different locations

### **CATEGORY**

 Africa

 Development

 Finance



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THANK YOU

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ありがとうございます

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