

# Possibility. Curiosity. Individuality.

IBM @ Q-Hack 2024

April 3 – 4, 2024

Mannheim, Germany





# Introducing Your IBM Mentors for Q-Hack '24!



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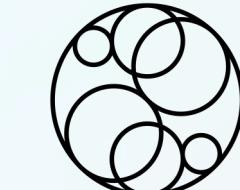
 @ raoul\_baron



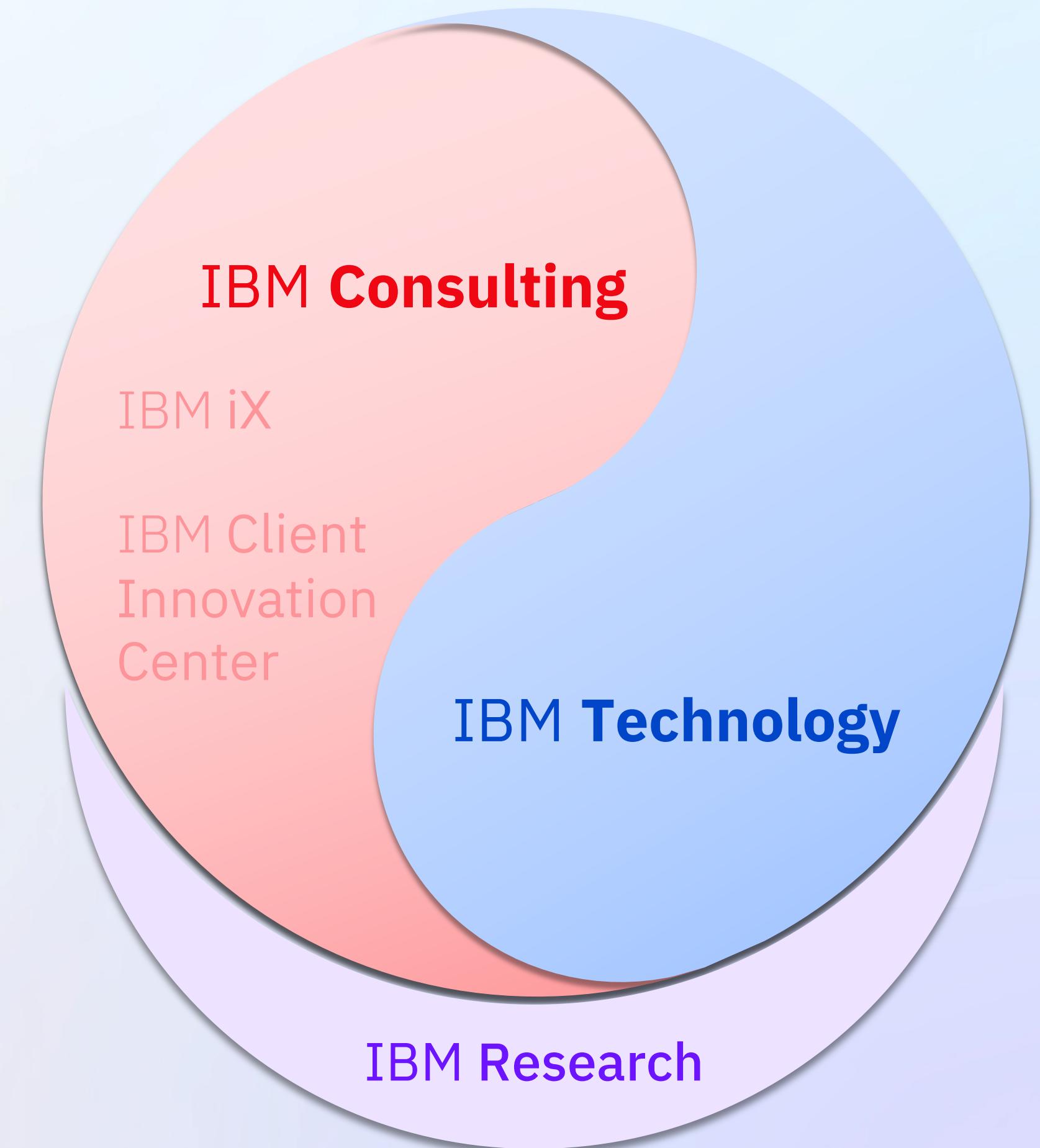
Today, IBM is the only company bringing together **innovative technology** and **consulting services**, backed by strong **research expertise** in our strategic technologies,

Hybrid Cloud

&



Artificial  
Intelligence



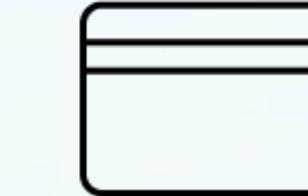
# Over 100 years of world-changing progress



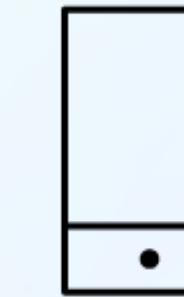
First hires of women and people of color



Apollo 11  
Moon Landing

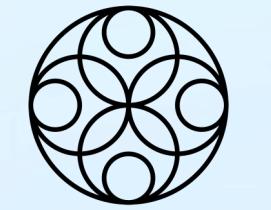


First Magnetic Stripe



Online Apple Pay Function

watsonx



1899

1928

1969

1973

1979

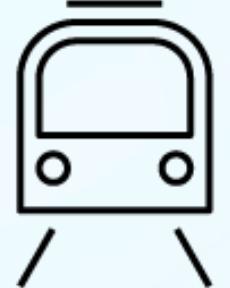
1981

2016

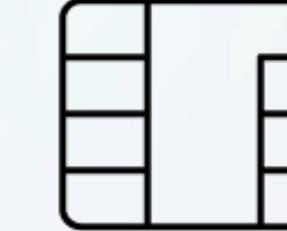
2019

2021

2023



Optimization of global rail networks



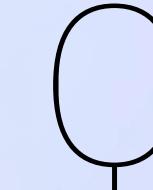
First ATM machines



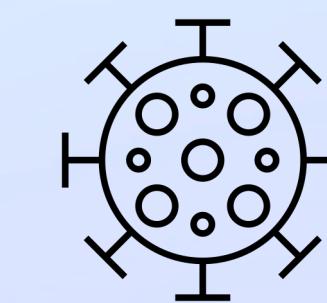
UPC Barcode



Excimer Laser Surgery



Quantum Computing



CovPass App



You find IBM at 25 locations  
in Germany, Austria and  
Switzerland, including data,  
research and development  
centers.





# Start your career @ IBM

Non-graduate and graduate opportunities

1

## Extreme Blue

IBM's best-in-class summer internship program for top talents

Duration: 12 weeks

Roles: GenAI Consultant and Data Scientist

Target: Develop a use case in an interdisciplinary team coached by experienced IBM AI experts.

Design the solution, develop a prototype and pitch it to business users.

A fixed salary for the duration of the contract.

2

## Master @ IBM

Combine work experience with your studies (Part-time Master or work-study model)

Duration: 12-30 months

Roles: Various (Sales, TechSales, Consulting, Exec. Assistants...)

Working time: 38h /week (incl. 10h for studies)

Fixed monthly salary + Travel expenses for university <> IBM and tuition fees/semester fees  
Covered (ESB, Hector School, HHL)

3

## Jumpstart

Jumpstart is part of the Associate Program - a program for career starters in IT

Duration: 6 weeks

Target: Start at your first client project in the field of data & AI immediately after completion.

Intensive training in the areas of data engineering, data warehouse, ETL, AI as well as cloud computing and Scrum.

Permanent position with unlimited employment  
Contract from day one.

4

## Associate Program

Early Professional- / Trainee Program in IBM Consulting

Duration: 2 years

Roles: Consultant, Data Scientist, Designer...

Target: Clear alignment of skills through specific career plan

Hired into one of three job roles with a specific career pathway and opportunities.

Permanent position with unlimited employment  
Contract from day one.

# IBM SkillsBuild Software Download

many links to free IBM Data & AI Resources

## Cloud Services

Watson Assistant  
Natural Language  
Understanding  
Visual Recognition

.... and much more.

## Software

SPSS Modeler Premium  
Cognos Analytics  
ILOG CPLEX Optimization  
Studio

.... and much more.

## Courses / Badges

Data Science Foundations  
Python for Data Science  
IBM Watson Studio -  
ML/DL made easy:  
Constraint Programming  
with ILOG

.... and much more.

free for students and teachers,  
just register with your university e-mail at:  
[ibm.com/academic](http://ibm.com/academic)





# Hybrid Cloud and AI Platforms



The industry's leading [unified hybrid cloud app platform](#)

&



Enterprise-ready generative [AI](#) and data platform

A platform approach is the strongest enabler of digital transformation.

IBM offers flexible, secure, open hybrid cloud and AI platforms for a multi-cloud, multi-AI model world

Learn more about  
(Gen)AI and get  
your hands on



[IBM Workshop:](#)

*GenAI – between concepts, technology and trends*



[IBM Challenge:](#)

*AI for evidence-based decision making in the public space*



[IBM Careers:](#)



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# Unleash AI Innovation: Your Challenge at Q-Hack '24

## The Challenge

Artificial Intelligence for Evidence-Based Decision-Making in Public Spaces:

Develop algorithms and models to analyze data from various sources to support informed decisions in policy areas such as healthcare, education, and environmental protection.

## Outcome & Deliverables

**A Proof of Concept** showcasing the feasibility of the solution and technologies applied.

**A user-friendly interface** tailored to a specific audience (Health, Environment, or Education).

**A presentation deck** that covers:

- The addressed issue and an overview of the proposed solution.
- A diagram illustrating the solution's architecture.
- A video recording showcasing a demo of the prototype.
- An evaluation of the solution's effectiveness and relevance.
- An outlook detailing how the solution could be scaled and further developed.

## Requirements

### Ideation / Design / Documentation

- Prototyping (Figma, InVision, XD, ...)
- Diagrams (e.g. draw.io)

### Implementation

- Large Language Models, Multi-Modal-Models
- Retrieval Augmented Generation, Embeddings, Semantic Search, Finetuning, GenAI + ML (hybrid approaches), Prompting
- Python, Pandas, LangChain
- ML Pipelines, MLOps

## Evaluation criteria



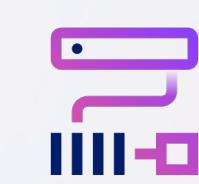
Creativity

0-5 Points



Relevance

0-5 Points



Feasibility

0-5 Points



Implementation

0-5 Points



Presentation

0-5 Points



Total

0-25 Points



# Let's stay connected.



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[linkedin.com/company/IBM](https://linkedin.com/company/IBM)



[youtube.com/LifeAtIBM](https://youtube.com/LifeAtIBM)

Register to become part of our talent network or apply to one of our selected positions for Q-Hack.



For any immediate questions, feel free to reach out to us and have a chat during the event!

