



UNIVERSITY OF  
**LOUISVILLE**<sup>®</sup>



**IBM**



*“I learned to take on things  
I’ve never done before.”*

GINNI ROMETTY, CEO OF IBM

# UOFL AND IBM, PARTNERS IN THE NEW WORLD OF EVERYTHING.

*One thousand one. One thousand two. One thousand three.*

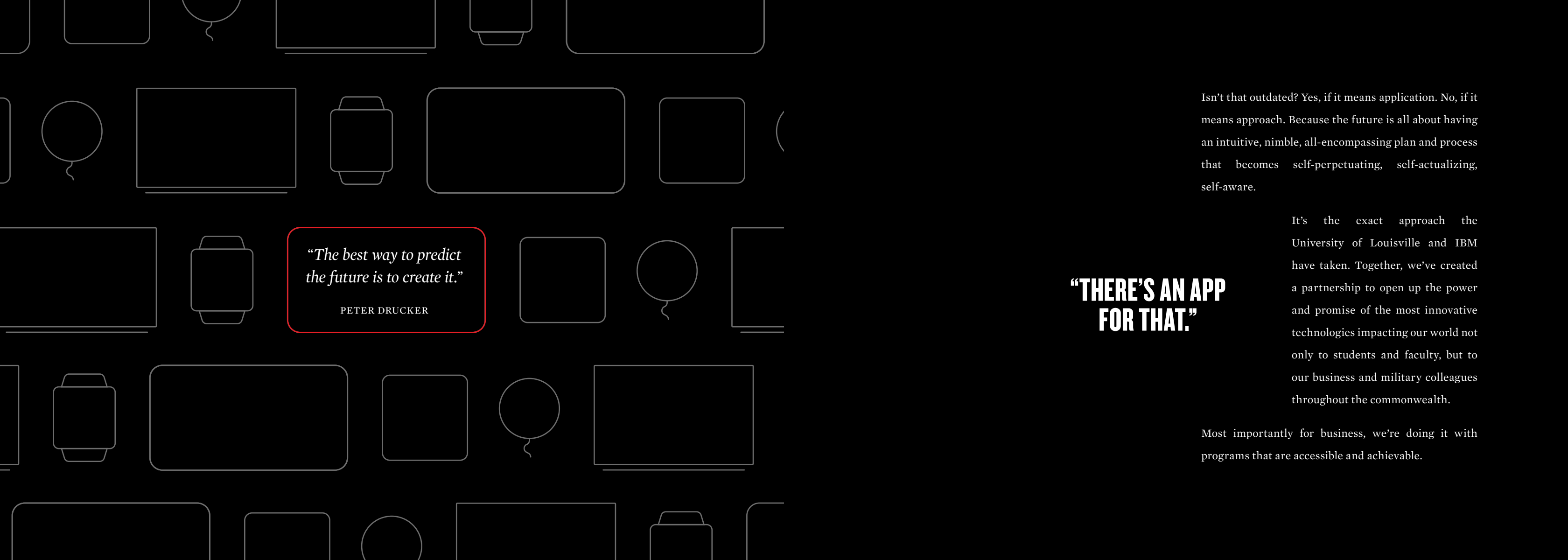
Every three seconds, a search engine processes more than 120,000 inquiries, on the way to 3.5 billion daily.

It’s a beautiful thing. Having everything in the known universe at our fingertips, responding to our voices, anticipating our needs. Having a partner that helps us realize our hopes and dreams. Because, ultimately, it helps us understand ourselves.

That’s the vision for humanity and our new digital world, for the partnership we’ve entered into with the technology

we’ve created. It’s a new world that’s coming at us faster every day, creating new pathways for progress, possibility, ideas and imagination. And here we are. Fully immersed, integrated, one with all things.

Except when we suddenly realize we don’t really understand all those things. Or how it all works. Or how to use it.



*“The best way to predict  
the future is to create it.”*

PETER DRUCKER

**“THERE’S AN APP  
FOR THAT.”**

Isn’t that outdated? Yes, if it means application. No, if it means approach. Because the future is all about having an intuitive, nimble, all-encompassing plan and process that becomes self-perpetuating, self-actualizing, self-aware.

It’s the exact approach the University of Louisville and IBM have taken. Together, we’ve created a partnership to open up the power and promise of the most innovative technologies impacting our world not only to students and faculty, but to our business and military colleagues throughout the commonwealth.

Most importantly for business, we’re doing it with programs that are accessible and achievable.

# THE PARTNERSHIP

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The University of Louisville and IBM Global Education and Skills Academy Partnership will transform the access, awareness, design and use of digital technology to enhance learning and discovery in the commonwealth.

That's our official mission statement. It's also your official invitation to join us. Why? Because there isn't a single industry in Kentucky and the nation that isn't being transformed by digitization, data and technology.

Technology drives strategy. Data is involved in virtually every decision.

But it's more than data; it's dreams. Technology has evolved to the point of being able to recognize and foster our aspirations, and help us realize our human potential and organizational possibilities.





*“An investment in knowledge  
pays the best interest.”*

BENJAMIN FRANKLIN

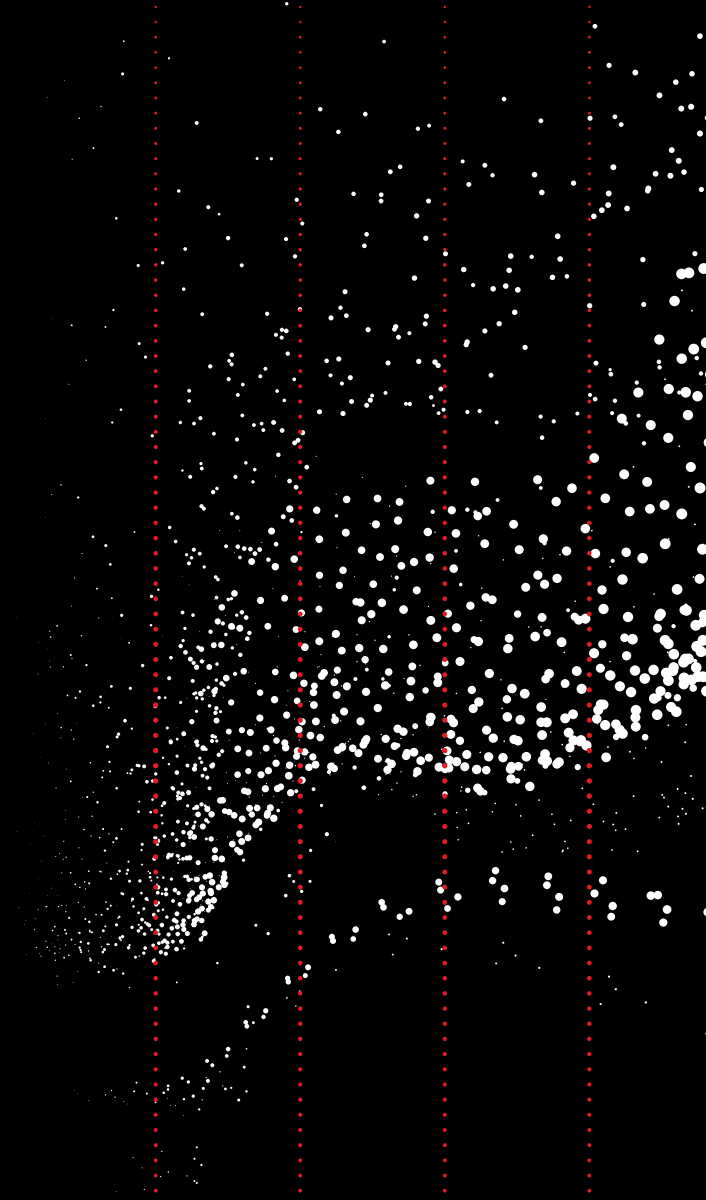
## FOUR PILLARS

The UofL and IBM partnership is structured on four pillars:

- Program curricula and skills training for students
- Faculty and staff development
- Civic and business partner engagement
- Research innovation and digital transformation

With this foundation, we can integrate the best features of industry and academic institution relationships. This is where innovation and entrepreneurship are born, where organizational and system improvements take shape.

This is the fertile ground where the modern workforce is cultivated, and research and development generated. This is where we develop solutions to our grand challenges.



# EIGHT PROGRAMS

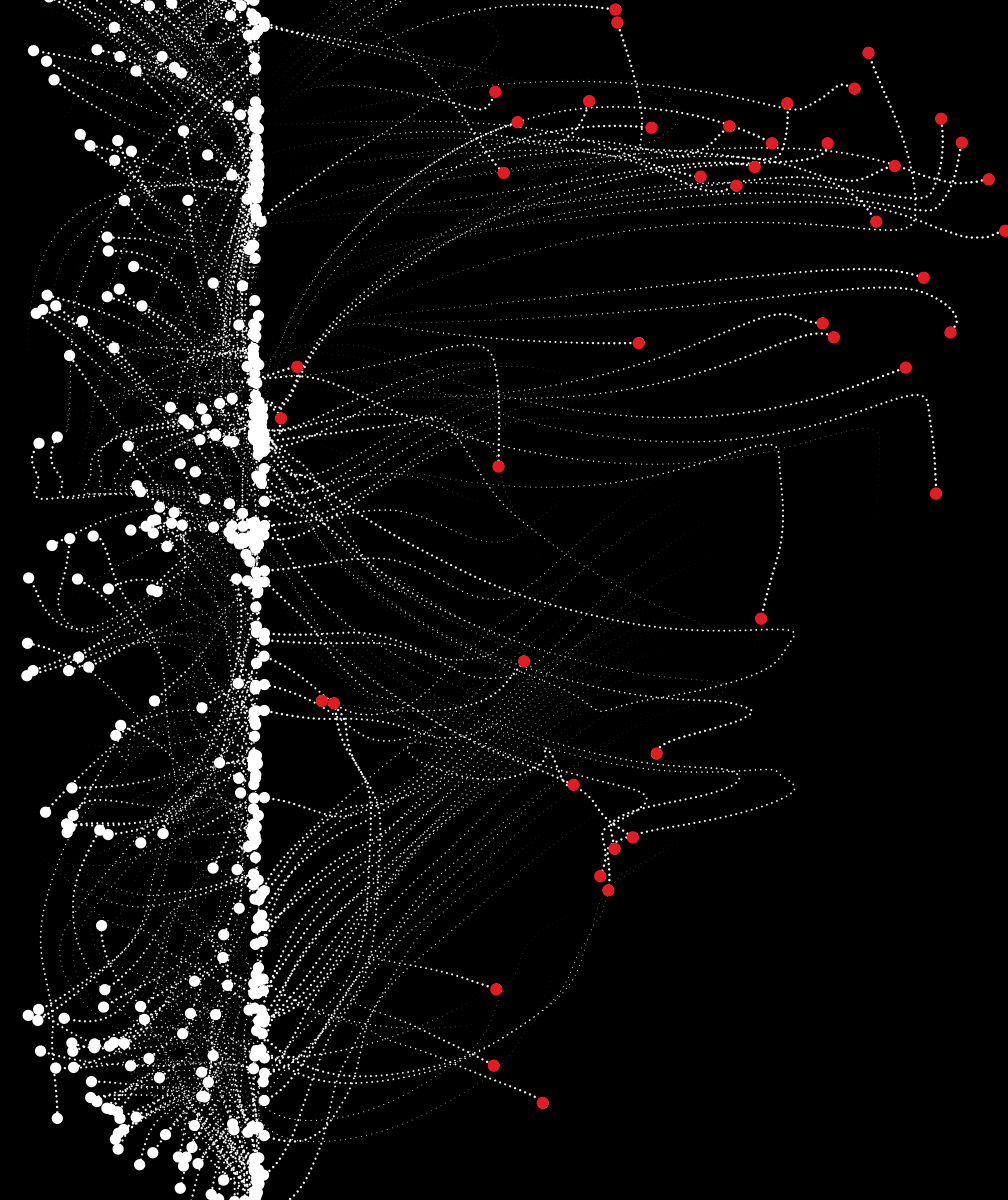
According to the U.S. Bureau of Labor Statistics, there will be an estimated 1 million more computing jobs than applicants who can fill them in 2020. This is exactly the kind of challenge the UofL and IBM partnership is designed to address.

Some more numbers: The share of jobs requiring AI skills has grown 4.5 times since 2013. More than 120 million jobs will be affected by the emergence of AI technologies in the next three years.

Kentucky will feel the effects of all of this. With the University of Louisville and IBM Global Education and Skills Academy Partnership, Louisville and the

commonwealth can be prepared. Not only to survive the challenges, but thrive because of them.

The UofL and IBM partnership is the first of its kind. We invite you to be among the first corporate leaders in the nation to engage with our future-focused curriculum and educational tools, with a constant focus on helping your workforce of today and tomorrow in eight of the fastest-growing areas of technology.



*Programs will focus on eight of the fastest-growing areas of innovation and technology.*

#### **ARTIFICIAL INTELLIGENCE**

Since the term first appeared in 1956, AI has evolved to become an integral part of our lives. Which makes perfect sense. Because AI is designed to mimic and mirror human beings through devices that work and react like us, particularly in speech recognition, learning, planning and problem solving.

#### **CYBERSECURITY**

Protecting computers, networks, programs and data from unauthorized access or attacks is the purpose of cyber security or, as it was originally known, information technology security. From individuals to companies to entire countries, cyber security is an essential part of the digital world we live in.

#### **INTERNET OF THINGS**

A popular way of looking at the Internet of Things or (IoT) is this: In the future everything that can be connected will be connected. From something as simple as turning on a coffeemaker from your phone, to entire “smart cities” of the future, IoT connects devices, machines, objects and, most importantly, people.

#### **DATA SCIENCE**

When thinking of Data Science, think in terms of “big data” or “data mining.” It’s the field that employs scientific methods, processes and algorithms to obtain knowledge and insights from data. It’s also a field that employs a whole lot of people with math, statistics and computer science backgrounds.

#### **BLOCKCHAIN TECHNOLOGY**

Blockchain technology has become central to record-keeping, especially in banking, investing and cryptocurrency. Defined as “a distributed, decentralized public ledger,” blockchain benefits include greater transparency, enhanced security, improved traceability, increased efficiency and speed, and reduced costs.

#### **CLOUD COMPUTING**

Instead of keeping files on a hard drive or local storage, cloud computing makes it possible to store files to a remote database. A user’s electronic device can then access files through a web connection. Advantages include increased productivity, speed and efficiency, performance and cost savings.

#### **QUANTUM COMPUTING**

You’ve heard of something or someone taking a quantum leap? The world of computing is working on taking just such a leap, using the principles of quantum theory applied to developing new computer technology – for performance that could be a billion-fold greater than today’s computing. Now that’s a leap.

#### **DESIGN THINKING**

Design Thinking puts us, human beings, front and center in developing and designing products and services. It’s a way of designing things and framing problems in human-centric ways, and developing products and services with a sense of empathy for the people who will use them. How thoughtful.



*“To master a new technology  
you have to play with it.”*

JORDAN PETERSON

## INFINITE POSSIBILITIES

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The company mantra at IBM is: *Let's put smart to work.*

At the University of Louisville, we say: *Start here. Never stop.* Did we collaborate on these before we formed a partnership? No. Not in any formal sense. But maybe there's something in the DNA of IBM and UofL that's connected us for some time.

Based on the way this partnership feels and how it's being embraced as we move forward, we think there's something very special happening.

It'll be even more special when our colleagues in Louisville and the commonwealth begin to harness this potential and empower people with skillsets and mindsets for a smarter future, igniting a new level of opportunity for today's and tomorrow's workforce.

That's what new technology should always do. Take the world we know and make it better. We can't think of a better reason to have formed a partnership between UofL and IBM. And, to form a partnership for a better world with you.



## **UNIVERSITY OF LOUISVILLE AND IBM GLOBAL EDUCATION AND SKILLS ACADEMY PARTNERSHIP**

The University of Louisville and IBM Global Education and Skills Academy Partnership is the co-creation of Dr. Neeli Bendapudi, president of the University of Louisville, and Dr. Naguib Attia, IBM vice president of Global University Programs.

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