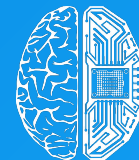




Global AI
Ecosystem



DEEP
KNOWLEDGE
GROUP

AI Industry in Greater Manchester

January, 2024

www.ai-ecosystem.org

www.ai-ecosystem.org/greater-manchester
www.ai-ecosystem.org/uk

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Introduction

Greater Manchester stands as a dynamic confluence where academia, industry, and government intersect to create a thriving ecosystem for artificial intelligence (AI). Its commitment to innovation is evident in the robust network of universities and research institutions that contribute to the advancement of AI technologies. As the digital revolution accelerates, Greater Manchester positions itself as a nexus for AI research and development, with the potential to significantly influence the global AI landscape.

The [AI Industry in Greater Manchester platform](#) comprises more than 215 companies across 50 main subsectors, including AI Infrastructure, HealthTech and BioTech, Finance and Banking, Media and Entertainment, Retail and E-commerce, and Manufacturing, among others. 175 investors, including 5 based in Manchester, fund local companies. The collaborative efforts of businesses, policymakers and hubs, which are reflected on the platform, to which this is a companion document, are crucial for the development of a solid AI ecosystem in Greater Manchester.

Introduction

The academic and research landscape of Greater Manchester is a cornerstone of its AI industry. Institutions like The University of Manchester, with its Christabel Pankhurst Institute for Health Technology and Innovation and the Institute for Data Science and Artificial Intelligence (IDSAI), are at the forefront of pioneering research. These entities foster a collaborative environment that propels advancements in AI, drawing on interdisciplinary expertise to address complex challenges in healthcare, robotics, and data science.

The IDSAI is a beacon for cutting-edge research and a hub for knowledge dissemination, equipping students and researchers with the tools to drive innovation. It is an embodiment of the region's dedication to building a sustainable AI-driven future, where academic inquiry translates into real-world applications. The institute's partnerships with key industry players and governmental bodies further amplify its impact, creating a cohesive framework for AI development that is both inclusive and forward-looking.

Manchester's AI industry also benefits from the Greater Manchester AI Foundry, a collaboration between four local universities, including Lancaster University, that provides a support mechanism for SMEs to innovate with AI. This initiative exemplifies the region's strategy to bridge the gap between research and commercialization, ensuring that academic breakthroughs are rapidly translated into market-ready solutions.

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Additionally, the city's concentration of AI enterprises, as highlighted by platforms like Clutch.co, showcases a vibrant commercial sector that is integral to the city's AI narrative. These companies range from startups to established tech firms, all contributing to a diverse industrial tapestry that harnesses AI for a variety of applications.

The synergy between academia and industry in Greater Manchester is not accidental but a result of deliberate investment in AI as a priority sector. The region's AI industry is augmented by MIDAS, Manchester's inward investment agency, which plays a pivotal role in positioning the city as an attractive destination for international AI firms. MIDAS facilitates connections, fosters collaborations, and provides tailored support to businesses, reinforcing Greater Manchester's status as a competitive player in the AI domain.

The academic and research environment in Greater Manchester is a testament to its vision of becoming a global AI powerhouse. The strategic alignment of educational institutions with industry and governmental initiatives sets a strong foundation for fostering innovation, attracting talent, and driving economic growth through AI. This collaborative ethos is what positions Greater Manchester as an exemplar of AI excellence on the international stage.

GMCA GREATER
MANCHESTER
COMBINED
AUTHORITY



MIDAS

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Introduction

Greater Manchester's AI sector has seen a flurry of activity, cementing its status as a burgeoning hub for innovation. Notably, the region has attracted major government funding, which is earmarked to catalyze advancements in materials, health, and AI technologies. This financial injection is poised to accelerate research and development, ensuring that Greater Manchester remains at the cutting edge of AI innovation.

In healthcare, Manchester's researchers are harnessing AI in groundbreaking ways. A trial involving innovative AI technology has shown promise in enhancing recovery rates for COVID-19 patients, demonstrating the city's commitment to leveraging AI for societal benefit. The initiative underscores the potential for AI to revolutionize healthcare by providing clinicians with advanced tools to improve patient outcomes.

Manchester Metropolitan University's exploration into the ethical implications of AI showcases the region's conscientious approach to technology deployment. The establishment of a Greater Manchester People's Panel for AI at the university is a pioneering step towards ensuring that AI development aligns with the public's values and expectations, promoting a responsible and community-centric approach to AI.



Manchester
Metropolitan
University



Greater Manchester People's Panel for AI established at the Manchester Metropolitan University.

Introduction

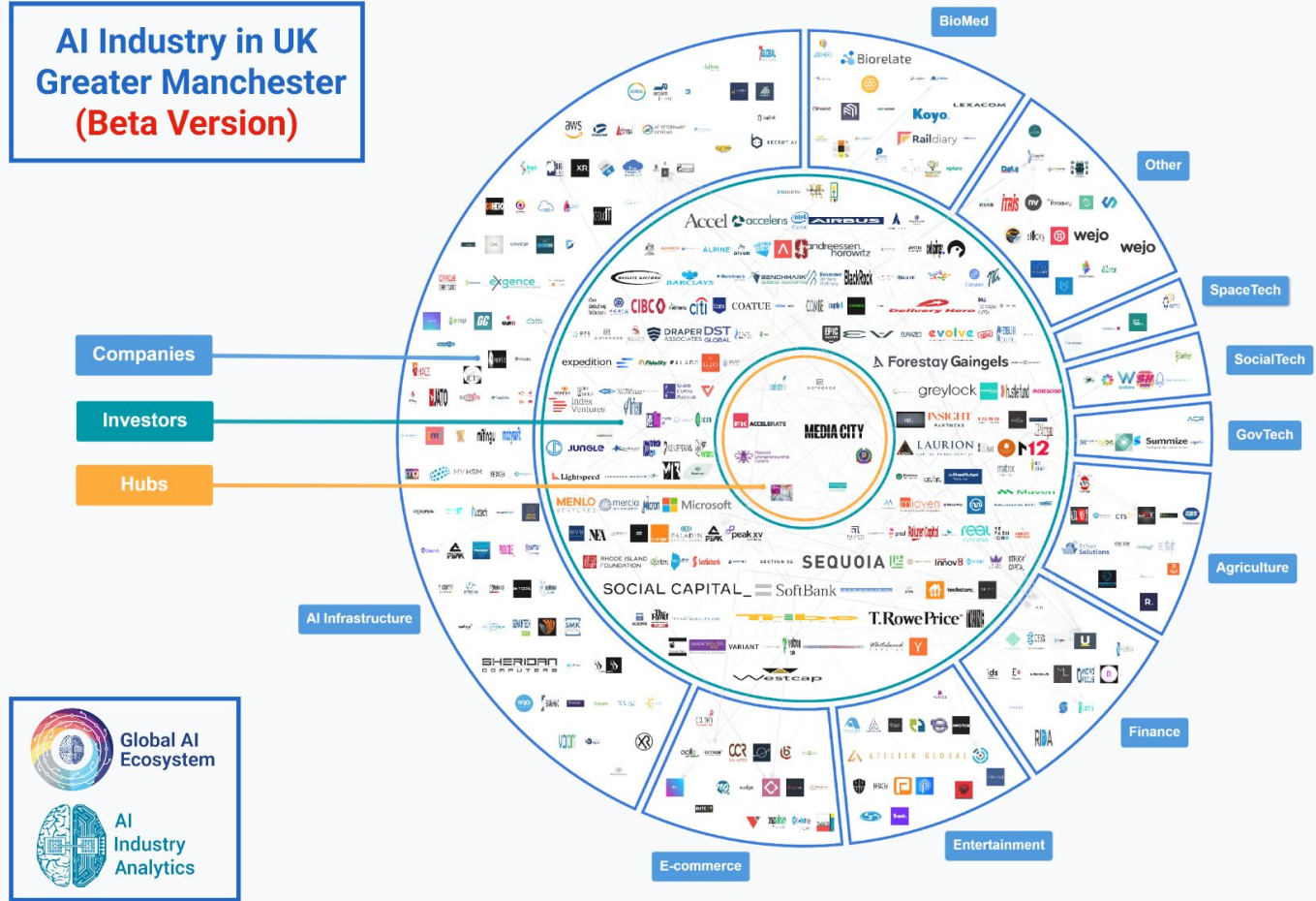
Further bolstering its AI prowess, more than 100 local SMEs have been supported through the Greater Manchester AI Foundry, indicating a strong commitment to nurturing a vibrant AI ecosystem. This support has been crucial in helping businesses integrate AI into their operations, spurring growth and innovation across various sectors. Transport for Greater Manchester (TfGM) has partnered with Google on an AI project aimed at reducing emissions and improving traffic flow. This collaboration is a testament to the region's ambition to address urban challenges through smart technology solutions, enhancing sustainability and quality of life for its residents. The announcement of a new robotics and AI center at the University of Manchester further solidifies the city's dedication to advancing these technologies. By providing a space for research and collaboration, the center is expected to yield transformative developments that could have wide-reaching impacts on industry and society.

Notably, the city's digital blueprint for 2023-26 outlines a strategic vision for Greater Manchester's digital transformation, underscoring AI's critical role. This comprehensive plan aims to harness AI's potential to drive economic growth, increase efficiency, and foster a digitally inclusive society. Through strategic investments, ethical considerations, and collaborative projects, the region is crafting a future where AI is not only a driver of economic growth but also a force for good. The convergence of research prowess, industry engagement, and governmental support underscores a comprehensive and integrated approach to AI development, setting a benchmark for others to follow. As the AI landscape continues to evolve, Greater Manchester is well-positioned to be at its vanguard, shaping the technologies that will define tomorrow.



AI Industry in UK Greater Manchester (Beta Version)

Companies - 215
Investors - 175
Hubs - 5



Source: platform.dkv.global/mind-map/ai-in-greater-manchester/

AI Industry in Greater Manchester: Current State

Companies by Sector

○ Cloud Computing & Storage Solutions	35
○ Data Warehousing & Management	13
○ AI Training Platforms	11
○ AI Model Deployment & Serving Platforms	11
○ Other	145

50
SECTORS

Investors by Type

○ Investor with Venture Investment Focus	103
○ Investors with Large AUM (Assets Under Management)	6
○ Investor with Specific Investment Approach	1
○ Other	60

170
INTERNATIONAL
INVESTORS

Companies by Industry

○ AI Infrastructure	8
○ HealthTech & BioTech	5
○ Media & Entertainment	4
○ Finance & Banking	4
○ Other	9

30
AI-FOCUSED
COMPANIES

Hubs by Type

○ Accelerators	1
○ R&D Hubs	1
○ University Hubs	1
○ Other	2

5
HUBS

395
ORGANISATIONS

Investors by Location

○ International Investors	170
○ Manchester-based Investors	5

175
INVESTORS

Companies by level of AI usage

○ Partially AI-related	130
○ AI-related	55
○ AI-focused	30

215
COMPANIES

Source: www.ai-ecosystem.org/greater-manchester

Artificial Intelligence Industry in Greater Manchester

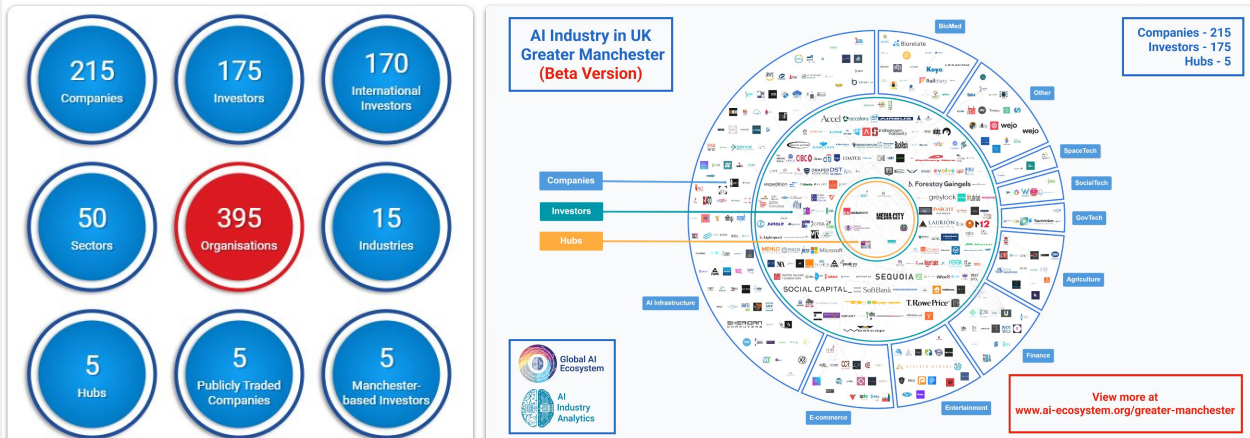
Platform

AI Industry in Greater Manchester Platform



AI Industry in UK (Greater Manchester) Beta Version

Artificial Intelligence has become a focus for consumers, institutions and regulators in the United Kingdom, and Greater Manchester in particular presents a landscape rich in innovation. The AI Industry in Greater Manchester platform comprises information about more than 215 companies across 50 main subsectors, including AI Infrastructure, HealthTech and BioTech, Finance and Banking, Media and Entertainment, Retail and E-commerce, and Manufacturing, among others. 175 investors, including 5 based in Manchester, fund local companies. The collaborative efforts of businesses, policymakers and hubs, which are reflected on this platform, are crucial for the development of a solid AI ecosystem in Greater Manchester.



Source: www.ai-ecosystem.org/greater-manchester

AI in Greater Manchester Knowledge Hub (Beta Version)

Scientific & IT Resources

10 AI Books

10 AI Journals

70 AI Articles

15 AI Benchmarks

15 AI Reports

20 AI Databases

5 AI Software

10 AI Models

Education & Collaboration

10 Conferences in Manchester

10 Workshops in Manchester

20 UK Certification Programmes

10 University AI Programs

20 Online AI Courses

10 Lectures by Leaders in Manche...

10 Manchester Research Projects

10 Scholarship Funds in Manchest...

Media & Trends

15 AI Leaders Interviews

10 Podcasts by AI experts

30 Manchester Blogs

200 AI News

50 AI Social Networks

10 Market Trends in Manchester

10 Diversity Trends in AI

10 Women Leading the Field

Rankings & Top Leads

215 Manchester Companies

100 Leaders in Manchester

175 Investors

5 Manchester Hubs

10 Manchester Regions

15 Consulting Services

10 Manchester Startups

5 Manchester Universities

Online Communities

80 LinkedIn

80 Facebook

40 Reddit

40 GitHub

40 Quora

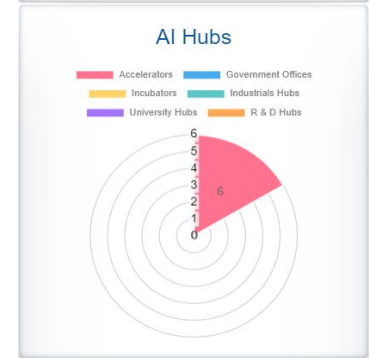
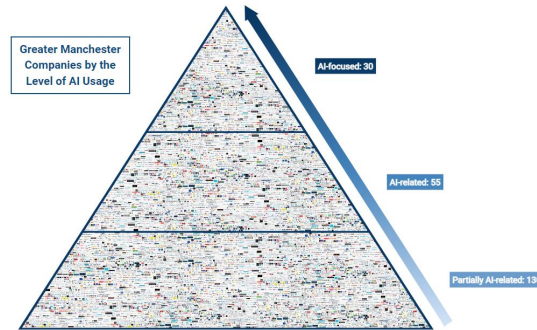
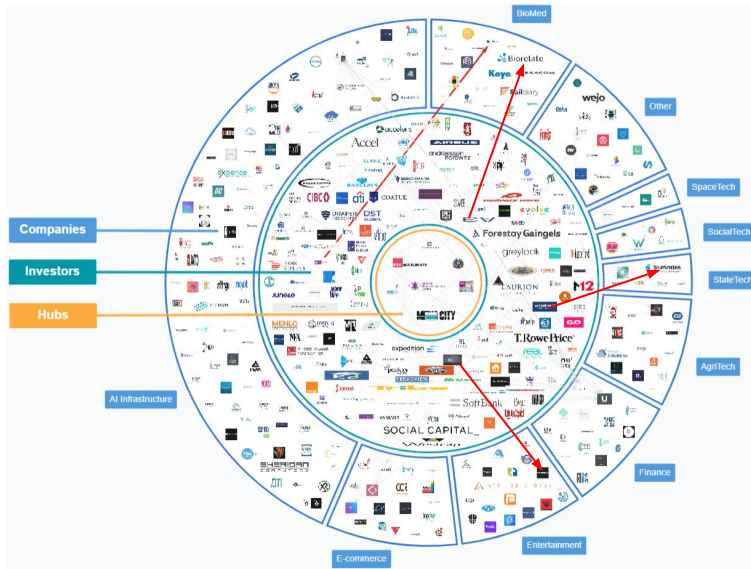
40 Twitter

40 Discord

40 Other Forums

Source: www.ai-ecosystem.org/greater-manchester

AI Industry in Greater Manchester: Platform



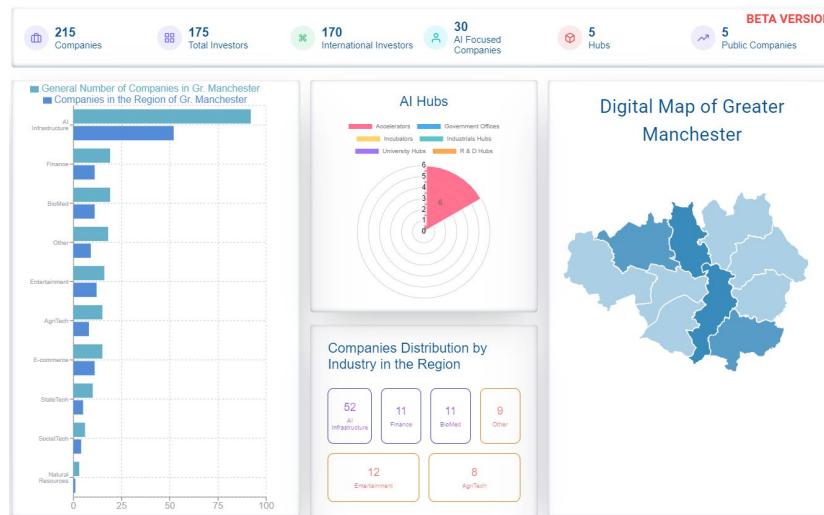
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AI in Greater Manchester Platform

The AI in Greater Manchester Platform is an innovative initiative led by AI Industry Analytics, aimed at fostering collaboration, innovation, and knowledge exchange within the dynamic AI ecosystem of Greater Manchester. The primary objective of this project is to establish a centralized platform that connects the various facets of Greater Manchester's AI industry, including companies, experts, investors, and AI hubs. By creating a cohesive digital environment, the platform aims to accelerate the growth and impact of AI development in Greater Manchester.

Key Features:

- ❑ **Company Directory:** A comprehensive directory showcasing the 215 AI companies in Greater Manchester, providing a detailed overview of their expertise, projects, and key personnel.
- ❑ **Expert Network:** A platform for AI professionals and experts to connect, collaborate, and share insights, fostering a culture of continuous learning and expertise enhancement.
- ❑ **Investor Portal:** An interface for the 175 investors interested in the Greater Manchester AI landscape, offering information on investment opportunities, trends, and success stories.
- ❑ **AI Hub Collaboration:** Facilitate communication and collaboration among the 5 AI hubs in Greater Manchester, serving as a catalyst for joint projects, research initiatives, and knowledge exchange.



Source: www.ai-ecosystem.org/greater-manchester

Artificial Intelligence Industry Overview

Main Principles

The Advantages of Artificial Intelligence Technology

5 Common Features of Artificial Intelligence

Learning & Adaptation

AI systems have the ability to learn from data and adapt their behavior over time. This learning process can occur through various techniques, such as machine learning, where algorithms analyze patterns in data and adjust their models to improve performance.

Problem Solving

AI is designed to solve complex problems by processing and analyzing large amounts of data. This involves making decisions, drawing conclusions, and generating solutions based on the information available to the system. Problem-solving in AI can range from simple tasks to highly intricate and specialized domains.

Automation

One of the primary goals of AI is to automate tasks that traditionally require human intelligence. This can include routine and repetitive activities, as well as more complex tasks such as decision-making, problem-solving, and natural language understanding.

Perception and Interaction

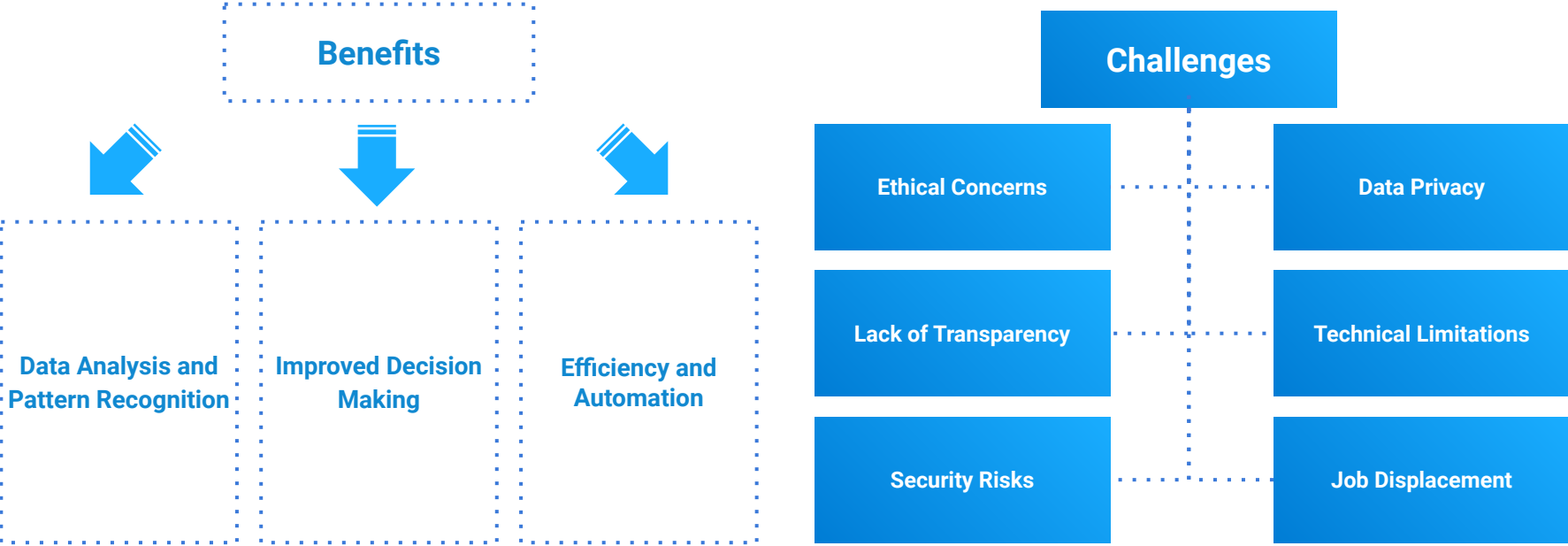
AI systems often incorporate capabilities related to perception and interaction with the environment. This can involve computer vision for image and video analysis, speech recognition for understanding spoken language, and natural language processing for comprehending and generating human language.

Adherence to Instructions

AI systems follow instructions or algorithms to perform specific tasks. The ability of AI to execute tasks based on instructions is a fundamental characteristic, whether it's in the form of rule-based systems, expert systems, or more advanced machine learning models.

The Benefits and Challenges of Artificial Intelligence

Artificial Intelligence (AI) brings a host of benefits, driving efficiency, automation, data analysis, and personalized experiences across industries. It enhances decision-making processes, improves safety and security measures, and fosters innovation. However, AI adoption is accompanied by significant challenges. Ethical considerations, such as privacy and bias concerns, require careful attention. The lack of transparency in AI decision-making, security risks, data privacy issues, and technical limitations pose additional hurdles.



AI in Greater Manchester Analytical Framework

AI Infrastructure

Building robust systems to support AI workloads, optimize hardware, scalable cloud solutions, efficient data storage

SocialTech

Applications range from sentiment analysis for community well-being to AI-driven solutions addressing social challenges

BuildTech

Integrates AI in construction and real estate. Enhances project management with predictive analytics, accelerates design processes

Entertainment

Enhances user experiences. Content recommendation algorithms deep learning creates realistic animations, and chatbots engage audiences, shaping a dynamic and immersive entertainment

E-commerce

AI Optimizes business and customer experience. Algorithms provide detailed customer behavior analysis, augmented reality technologies, supplier management and many more

Finance

AI revolutionizes operations. From algorithmic trading and fraud detection to personalized financial advice, AI enhances efficiency, minimizes risks, and provides insights for decision-making

Biomed

AI accelerates healthcare innovation. It aids in drug discovery, interprets medical images for diagnosis, and personalizes treatment plans through predictive analytics, ushering in a new era of precision medicine

Artificial Intelligence Industry in Greater Manchester

Investment

Investments in Greater Manchester's AI Sector

Investment in Greater Manchester's AI industry signifies a strategic commitment to fostering a technologically progressive environment. This region, renowned for its industrial heritage, is now paving the way for a new era defined by intelligent systems and data-driven innovation. The Deep Knowledge Group recognizes this transformative potential, acknowledging the influx of capital as a catalyst for the city's technological renaissance. This investment landscape is a central focus of Deep Knowledge Ventures, which leverages its analytical prowess to identify and nurture promising AI ventures. The consortium's focus on AI, along with Precision Medicine and Longevity, aligns seamlessly with Greater Manchester's strategic emphasis on these sectors. The synergy between the analytical insights from subsidiaries like Aging Analytics Agency and the financial mechanisms at play is crucial for guiding ethical and profitable investments.

Moreover, initiatives such as the Greater Manchester AI Foundry illustrate the effective channelling of resources to support small and medium enterprises in incorporating AI solutions. This not only spurs local innovation but also attracts external investors looking for vibrant, tech-savvy regions with a clear vision for AI integration in various sectors.

#	TITLE	LOGO	YEAR	DESCRIPTION
1	Development Bank of Wales		2001	Development Bank of Wales provides flexible finance for businesses based in Wales.
2	In-Q-Tel		1999	In-Q-Tel identifies and partners with companies developing cutting-edge technologies to help deliver solutions.
3	International Finance Corporation		1956	IFC fosters sustainable economic growth in developing countries by financing private sector investment, mobilizing capital in the international financial markets, and providing advisory services to businesses and governments. IFC helps companies and financial institutions in emerging markets create jobs, generate tax revenues, improve corporate governance and environmental performance, and contribute to their local communities. The goal is to improve lives, especially for the people who most need the benefits of growth.
4	Rhode Island Foundation		1916	Rhode Island Foundation is a proactive community and philanthropic leader dedicated to meeting the needs of the people of Rhode Island.
5	The Waterloo Foundation			The Waterloo Foundation (TWF) is an independent grant-making Foundation.

Government investors in Greater Manchester AI as listed in the [AI in Greater Manchester platform](#).

Investments in Greater Manchester's AI Sector

Investment in Greater Manchester's burgeoning AI sector is a driving force behind the region's ascent as a pivotal center for technological innovation. At the core of this investment landscape is MIDAS, Manchester's inward investment agency, which is instrumental in positioning the city as a fertile ground for AI development. MIDAS plays a pivotal role in attracting and securing domestic and international investment by showcasing the region's strengths in AI and digital capabilities.

The Deep Knowledge Group, with its acute focus on AI, recognizes the strategic value of such investments. Through entities like Deep Knowledge Ventures and Aging Analytics Agency, the group steers investments towards ventures that promise to catalyze progress in AI, longevity, and precision medicine, sectors that are strongly represented in Greater Manchester's economic strategy.

MIDAS' involvement extends beyond attraction, offering hands-on support to investors and businesses to navigate the ecosystem, fostering connections with key local stakeholders, and providing market intelligence. This comprehensive approach ensures that investments are not only brought in but are also effectively integrated into the city's AI tapestry, contributing to sustainable growth and innovation.



MIDAS

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Artificial Intelligence Industry in Greater Manchester

Policy and Governance

AI Policy and Governance

A pivotal moment in this journey was Greater Manchester's selection as one of the three UK Innovation Accelerator regions, a recognition that not only endorses the city's innovative capabilities but also its potential to become a global powerhouse in AI and related fields. This distinction comes with substantial government funding, which bolsters ongoing efforts to address some of the most pressing global challenges through advanced technology.

The Manchester Turing Innovation Hub, led by the University of Manchester, stands at the forefront of these efforts. The hub's mission is to accelerate Greater Manchester's digital economy, which is valued at an impressive £5 billion. It aims to foster the growth of existing startups and stimulate the creation of new ones, particularly in AI. The hub also prioritizes skill development in the region, with an inclusive approach that seeks to engage women and under-represented groups within the industry.

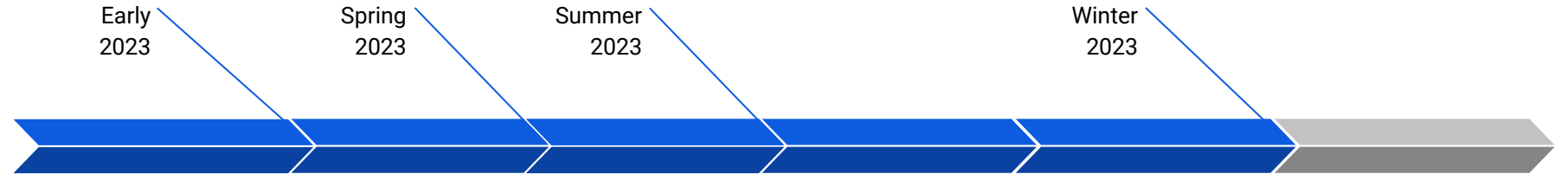
As it bridges research and business, the hub aspires to position Greater Manchester as a leader in AI commercialization, potentially transforming the regional economy and job market. Further strengthening the AI landscape, the Greater Manchester Advanced Diagnostics Accelerator focuses on leveraging AI in diagnostics to improve health outcomes for local communities, particularly in areas of prevalent health issues like liver, heart, and lung diseases.

By promoting a shift from reactive care to proactive community prevention, the program exemplifies a forward-thinking approach to healthcare. The DEVOTE program, another University of Manchester-led initiative, is revolutionizing the use of biomarkers in healthcare. By developing rapid bedside tests, DEVOTE seeks to bridge the gap between biomarker discovery and clinical application, thereby enhancing patient care and fostering a culture of innovation in healthcare diagnostics. Complementing these health-focused endeavors, the Sustainable Materials Translational Research Centre is a collaborative effort to address the urgent need for sustainable materials.

With Greater Manchester's rich history in materials development, this project is poised to create new business opportunities and attract inward investment, particularly in the Atom Valley Mayoral Development zone, promising new jobs and opportunities for local communities. Collectively, these initiatives reflect Greater Manchester's holistic strategy to leverage AI for economic growth, improved healthcare, and sustainable development, fortifying its status as a region where innovation is not only embraced but actively cultivated for the betterment of society and industry alike.

AI in Greater Manchester: Recent Developments

Greater Manchester has experienced a surge in developments that underscore its ascent as a preeminent hub for artificial intelligence and innovation. This growth trajectory is marked by a series of strategic initiatives and investments aimed at harnessing the transformative power of AI to catalyze regional and national progress.



Early
2023

Spring
2023

Summer
2023

Winter
2023

Announcement of significant government funding for the Greater Manchester Innovation Accelerator

Acknowledging the region's burgeoning AI and technology ecosystem.

The Greater Manchester Advanced Diagnostics Accelerator

Program commences, aiming to improve health outcomes and support local businesses through advanced diagnostics focused on liver, heart, and lung diseases.

Launch of The Manchester Turing Innovation Hub

A University of Manchester-led initiative to boost the region's £5bn digital economy and AI sector, with a focus on supporting startups and developing AI skills.

Initiation of the DEVOTE program

Initiation of the DEVOTE program for rapid genomic testing technology development, led by The University of Manchester, to expedite the clinical application of biomarkers.

The Sustainable Materials Translational Research Centre

Project starts, involving The University of Manchester and other partners, to drive local and national supply chain connectivity and new business creation, particularly in the Atom Valley Mayoral Development zone.

Ongoing Strategic Projects and Collaboration

As these projects unfold, they are expected to reinforce Greater Manchester's position as a premier AI research and development hub, attract industrial co-investment, and foster globally competitive innovation centers.

Artificial Intelligence Industry in Greater Manchester

Summary

Key Takeaways



Robust Academic and Research Ecosystem: Greater Manchester boasts a strong network of universities and research institutions like The University of Manchester, IDSAI, and the Christabel Pankhurst Institute for Health Technology and Innovation. These institutions are not only advancing AI technology but also ensuring its practical application in critical areas like healthcare, robotics, and data science.



Synergy Between Academia and Industry: The region benefits from initiatives like the Greater Manchester AI Foundry, which demonstrates a strategic approach to bridge the gap between research and commercialization. This synergy is further augmented by MIDAS, Manchester's inward investment agency, playing a crucial role in attracting international AI firms and fostering collaborations.



Governmental Support and Funding: The selection of Greater Manchester as one of the UK's Innovation Accelerator regions, accompanied by significant government funding, underscores the government's confidence in the region's innovation ecosystem. This support is crucial for the advancement of AI and related technologies.

Key Takeaways



Inclusive and Ethical AI Development: Efforts like the Greater Manchester People's Panel for AI at Manchester Metropolitan University highlight the region's commitment to ethical AI development. This ensures that AI policies and innovations align with public values and expectations.



Infrastructure for AI Development: Initiatives such as the Manchester Turing Innovation Hub and the launch of new AI and robotics centers at the University of Manchester are pivotal in enhancing the region's digital economy and AI sector. These infrastructural developments are expected to transform the regional economy and job market.



Comprehensive Digital Strategy: The city's digital blueprint for 2023-26 outlines a strategic vision for digital transformation, emphasizing AI's role in driving economic growth, increasing efficiency, and fostering a digitally inclusive society.



Global AI Ecosystem

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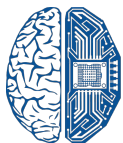
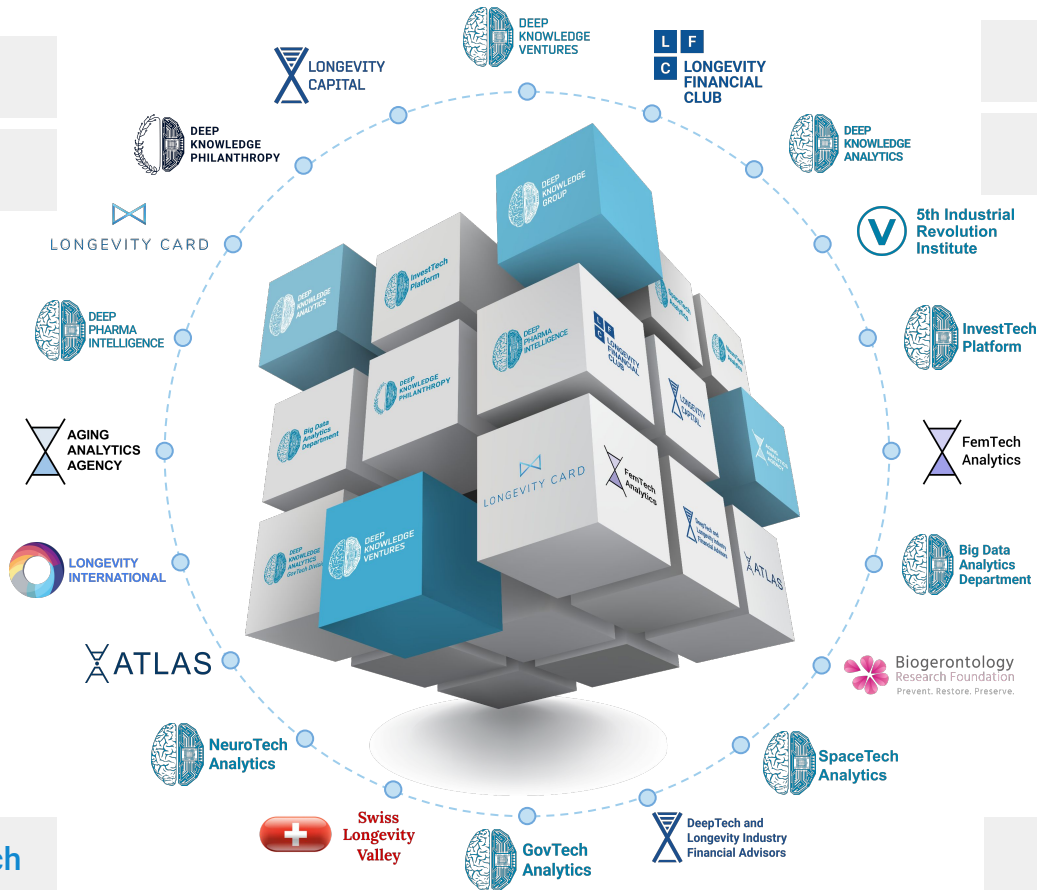
Deep Knowledge Group



AI Industry Analytics

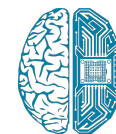
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