

People and Skills Group, Suffolk Chamber of Commerce

Al and the Future of Work

Insights and Innovations for Suffolk Businesses



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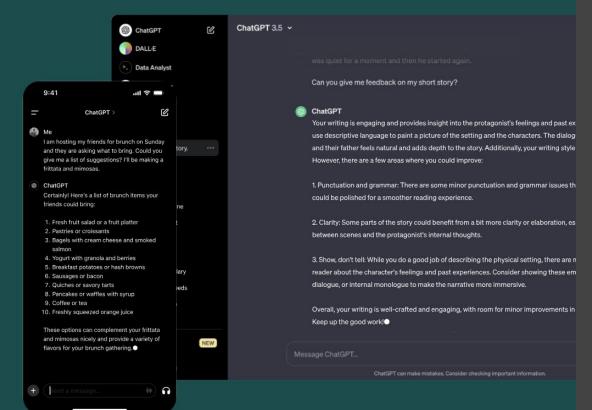
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Write a grant proposal to take 10th graders to a college fair



How can teachers make lectures more engaging and effective?



Tell me the latest findings of the Nation's Report Card in five paragraphs



Make a syllabus template for a college-level course



Make a rubric for success in an Intro to Psychology course



Know any funny jokes on the theory of relativity?

Copilot uses Al. Check for mistakes. Terms Privacy FAQs

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Ask me anything...







Artificial Intelligence: definitions

Highly capable general-purpose AI

- Foundation models that can perform a wide variety of tasks.
- Their capabilities can match or exceed those present in today's most advanced models.
- Such models will span from novice through to expert capabilities, with some even showing superhuman performance across a range of tasks.

Highly capable narrow AI

- Foundation models that can perform a narrow set of tasks, normally within a specific field like biology.
- Their capabilities can match or exceed those present in today's most advanced models.
- Generally, such models will demonstrate superhuman abilities on these narrow tasks or domains.

Agentic Al or Al agents

- An emerging subset of AI technologies that can competently complete multiple sequential steps over long timeframes e.g. sending email or instructions to physical equipment to complete a high-level task or goal.
- These systems can use tools such as coding environments, the internet, and narrow AI models to complete tasks.

Distinguishing hype from reality...

Al is an evolution of technologies we are already using:

- to assist human capabilities
- to automate
- to delegate tasks
- to personalise experiences and learning

Applications of Al in Management of People and Skills

- Efficiency and Productivity: Al can enhance efficiency and productivity by automating repetitive tasks, freeing up HR teams to focus on more strategic initiatives
- Structured Processes: Al can assist in structuring processes such as onboarding and offboarding, making them more streamlined and efficient
- Cost Reduction: By automating tasks and improving efficiency, AI can help cut costs in HR operations

Applications of Al in Management of People and Skills

- Data-Driven Decision Making: All can analyse large volumes of data to identify patterns and make predictions, aiding in data-driven decision making
- Personalised Learning: Al tools can analyse learner performance and adapt the curriculum or content to their needs and preferences
- Bias (Mitigation): Al can assist in mitigating bias in HR decisions by using data and objective criteria.

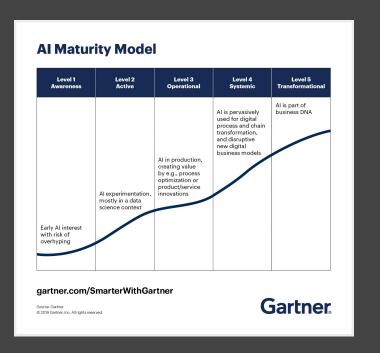
Applications of Al in Management of People and Skills

- Role Design and Skills Assessment: All can help understand what All means for the workforce in terms of role design and skills
- Talent Acquisition and Retention: All can assist in the recruitment process by screening CVs and predicting candidate success. It can also identify factors that influence employee retention.

You cannot use Al without data

Digital transformation and Digital Maturity

- moving everything to digital
- the integration of digital technology into all areas of a business
- fundamentally changes how a business or organisation operates and delivers value to customers
- requires organisations to continually challenge the status quo, experiment, and get comfortable with failure.



Your turn:

Where are you in your digital journey?

AI Maturity Model

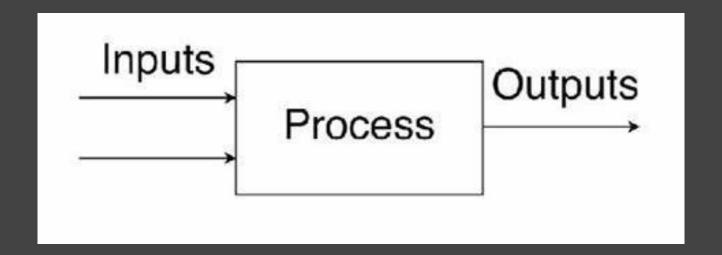
Level 1	Level 2	Level 3	Level 4	Level 5
Awareness	Active	Operational	Systemic	Transformational
Early AI interest with risk of overhyping	Al experimentation, mostly in a data science context	Al in production, creating value by e.g., process optimization or product/service innovations	Al is pervasively used for digital process and chain transformation, and disruptive new digital business models	Al is part of business DNA

gartner.com/SmarterWithGartner

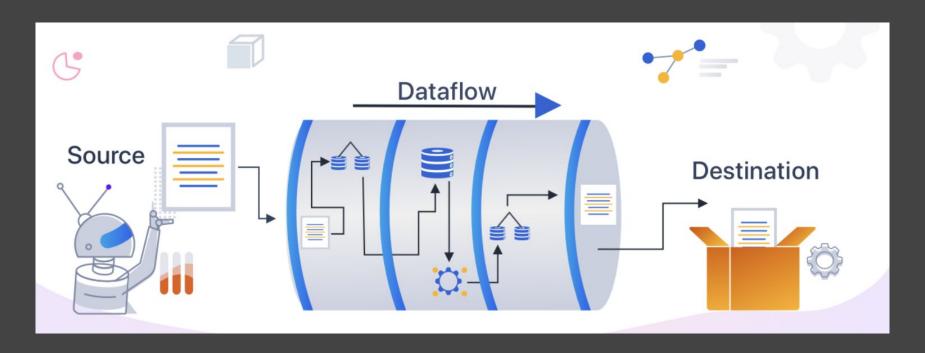
Source: Gartner
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How does it work?



How does it work?



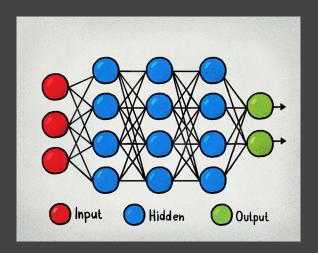
Al Models

Machine Learning : (e.g. XGBOOST, Random Forest)

Subset Subset Subset

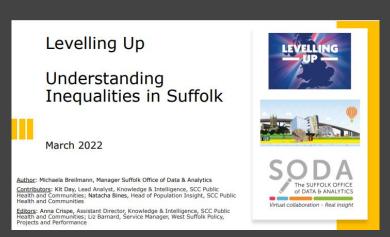
Tree Tree Tree

Deep Learning: (e.g. CNN, LSTM)



Suffolk: Key economy focus areas (missions)

- 1: Boost productivity, pay, jobs and living standards.
- 2: Increase domestic public investment in R&D
- 3: Improve local public transport connectivity
- 6: Increase the number of people successfully completing high-quality skills training
- 7: Narrow the gap in healthy life expectancy
- 8: Improve well-being in every area



https://www.suffolkobservatory.info/wp-content/uploads/202 2/12/SODA Levelling-Up-Understanding-Inequalities-in-Suffolk March-2022.pdf

Concerns and cautionary tales

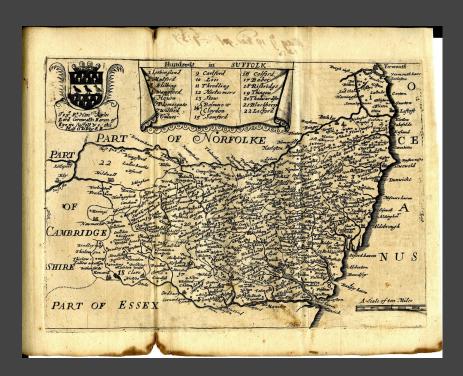
- Due diligence
- Intellectual property & ownership of information
- ensure benefits of AI are accessible to all
- Job displacement
- Allow productivity and purpose in life
- Privacy concerns (security / safe AI)
- explainable/transparent Al
- Al education and training programmes
- Raise awareness of technology
- Long term effects in our work practices and local and global economies
- regulation



Concluding thoughts

People and Skills development (Human Resources) sector has been pioneering data driven decision making in some areas, but:

- potential to bring significant economic benefits
- challenges need to be addressed (job displacement, misinformation, security, privacy)
- needs strategic consideration: digital transformation, digital assets, innovation





Key legislation to look out for :

- UK's Framework for AI regulation
- EU's AI Act



Find out more about how we are helping businesses with their Al journey here: https://www.uos.ac.uk/business/business-engagement/

Thank you! Questions?

Useful Reading

- (1) The Role of Artificial Intelligence in Digital Transformation, https://www.ptc.com/en/blogs/corporate/artificial-intelligence-digital-transformation.
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- (3) How to implement an Al and digital transformation | McKinsey. https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/rewired-to-outcompete.
- (4) Importance of AI in Digital Transformation Silver Touch Technologies https://www.silvertouch.com/blog/importance-ai-digital-transformation/.
- (5) Al for Small Business: 14 Tools and 7 Strategies | Birdeye. https://birdeye.com/blog/ai-for-small-businesses/.
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- (8) The Role of Artificial Intelligence in Digital Transformation for https://www.glueup.com/blog/artificial-intelligence-in-digital-transformation.
- (9) Impact of Artificial Intelligence on Local Businesses. https://www.thedallasseocompany.com/blog/ai-on-local-businesses.
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- [11] A Comprehensive Review of Generative AI in Healthcare arXiv.org. https://arxiv.org/pdf/2310.00795v1.pdf.
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- [19] Generative AI: The Insights You Need from Harvard Business Review. https://www.hbsp.harvard.edu/product/10697-PDF-ENG.
- [20] How Generative AI Is Changing Creative Work Harvard Business Review. https://hbr.org/2022/11/how-generative-ai-is-changing-creative-work.

Useful Reading

- (21) The economic impact of artificial intelligence on the UK economy PwC UK. https://www.pwc.co.uk/economic-services/assets/ai-uk-report-v2.pdf.
- (22) Generative AI and the labor market | Deloitte Insights. https://www2.deloitte.com/uk/en/insights/economy/generative-ai-impact-on-jobs.html.
- (23) PwC's Global Artificial Intelligence Study | PwC. https://www.pwc.com/gx/en/issues/data-and-analytics/publications/artificial-intelligence-study.html.
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- [26] A Comprehensive Review of Generative AI in Healthcare. https://arxiv.org/abs/2310.00795.



How can Al help?

Improving Public Transport

- optimise routes and schedules
- predict maintenance needs
- improve the overall efficiency of the transport system
- better connectivity
- potentially increase usage of public transport.



Improving Healthy Life Expectancy and Well-being:

- predictive analytics: identify health risks early
- Al-powered telemedicine: healthcare accessible to all
- personalised recommendations for improving mental health
- used for diagnosis and treatment

Al is helping us innovate

In agriculture:

- monitoring crop health
- predicting weather patterns
- optimising irrigation
- crop and soil monitoring
- insect and plant disease detection
- livestock health monitoring
- intelligent spraying
- automatic weeding
- aerial survey and imaging, and produce grading and sorting



Al is helping us innovate

In waste management or gritting operations optimisation:

- Al can develop detailed maps of each area
- to find the best routes for their trucks, reducing travel time, fuel costs, and emissions.
- used in smart bins,
- waste-sorting robots,
- waste generation models
- waste monitoring and tracking

→ See: Smarter Suffolk Project (PI Prof Nicholas Caldwell): explore patterns in data collected via sensors all over the county on living conditions, weather monitoring and the environment

