

Artificial Intelligence fundamentals: a managerial perspective

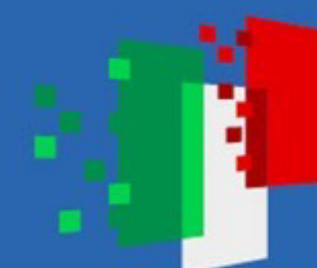
Week 3 – Takeaways



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Week 3 – Takeaways

In the third week of the course, we analyzed some key managerial considerations that companies must consider when starting AI initiatives. These considerations help organizations navigate the complexities of AI and ensure a responsible implementation, alignment with business goals, and ethical deployment. The key concepts introduced during the week are presented below.



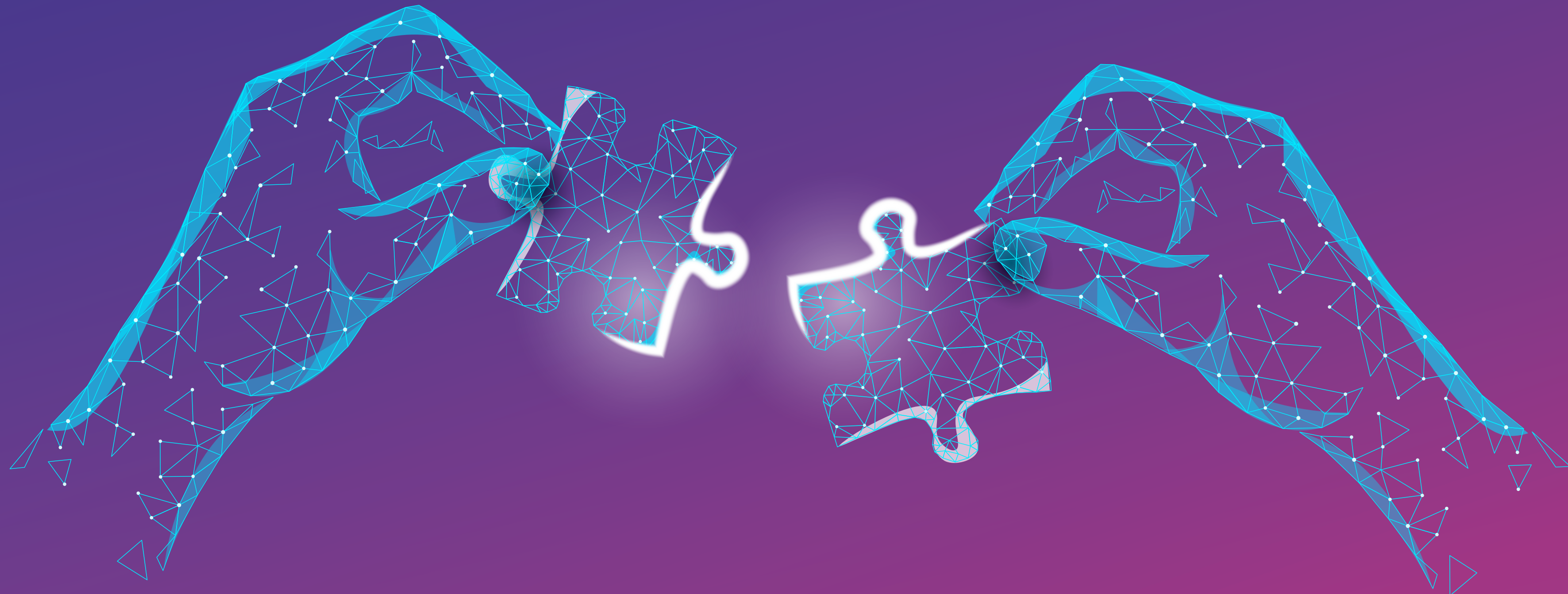
Balancing Performance with Explainability

AI implementation requires balancing model performance with interpretability. Advanced models like deep learning offer high accuracy but tend to function as "black boxes", making decisions difficult to explain. This lack of transparency can present challenges in trust, accountability, and regulatory compliance. Explainable AI techniques aim to bridge this gap by providing tools that enhance transparency and interpretability. Businesses might use global explainability methods to understand the general impact of variables or local explainability techniques to assess individual predictions. Adopting these approaches can help companies build trust among stakeholders, comply with regulations, and extract insights from AI models that can be integrated into business processes transparently.



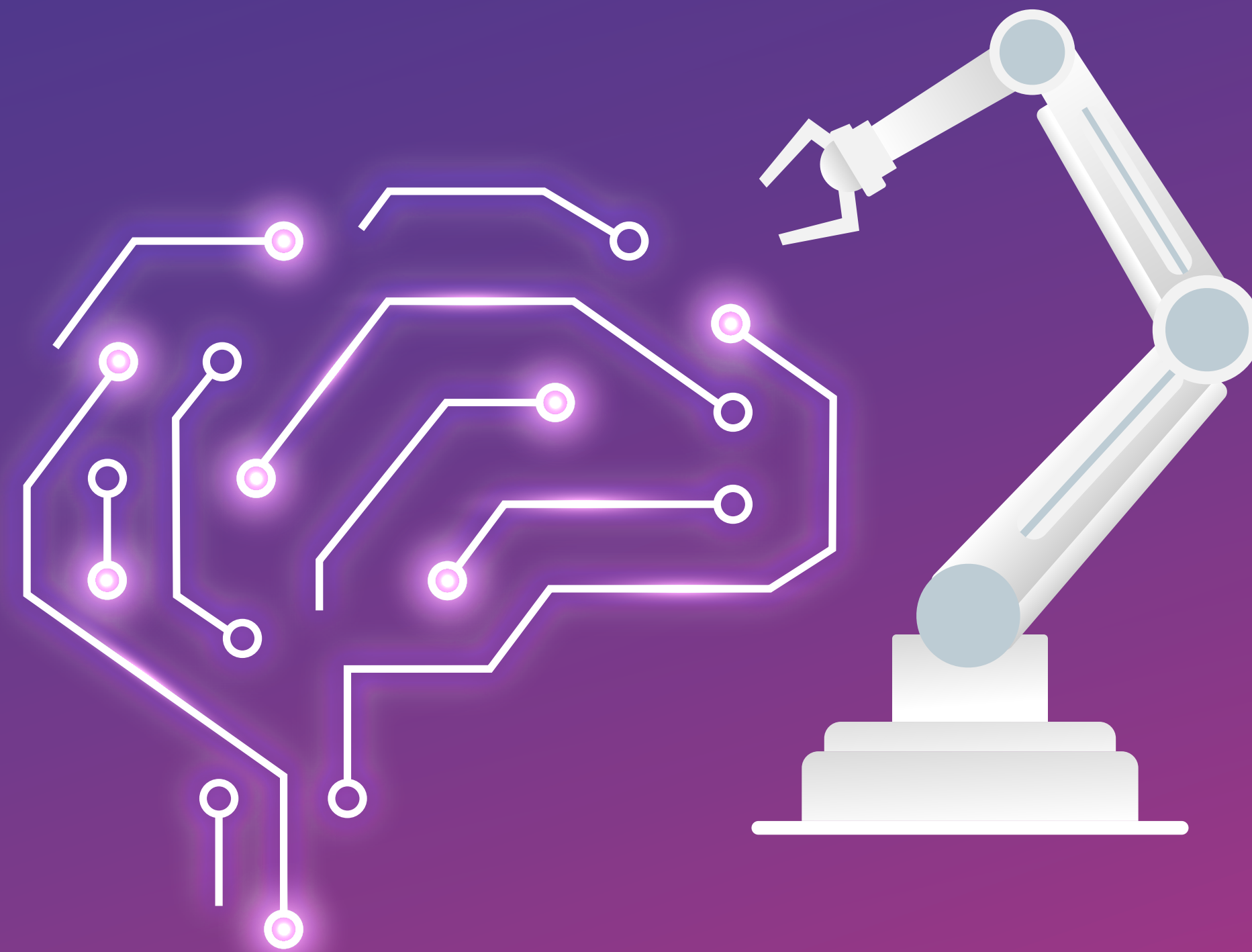
Addressing Data Bias and Ethical Concerns

Data bias is another critical concern. AI models learn from historical data, which can embed and perpetuate existing biases. For instance, predictive AI might reinforce inequalities in hiring, lending, and other decision-making processes, while generative AI might amplify stereotypes in content creation. Therefore, companies need to assess bias risks and take countermeasures when appropriate. For instance, they can work on building diverse datasets, audit algorithms regularly, and implement fairness-aware AI techniques.



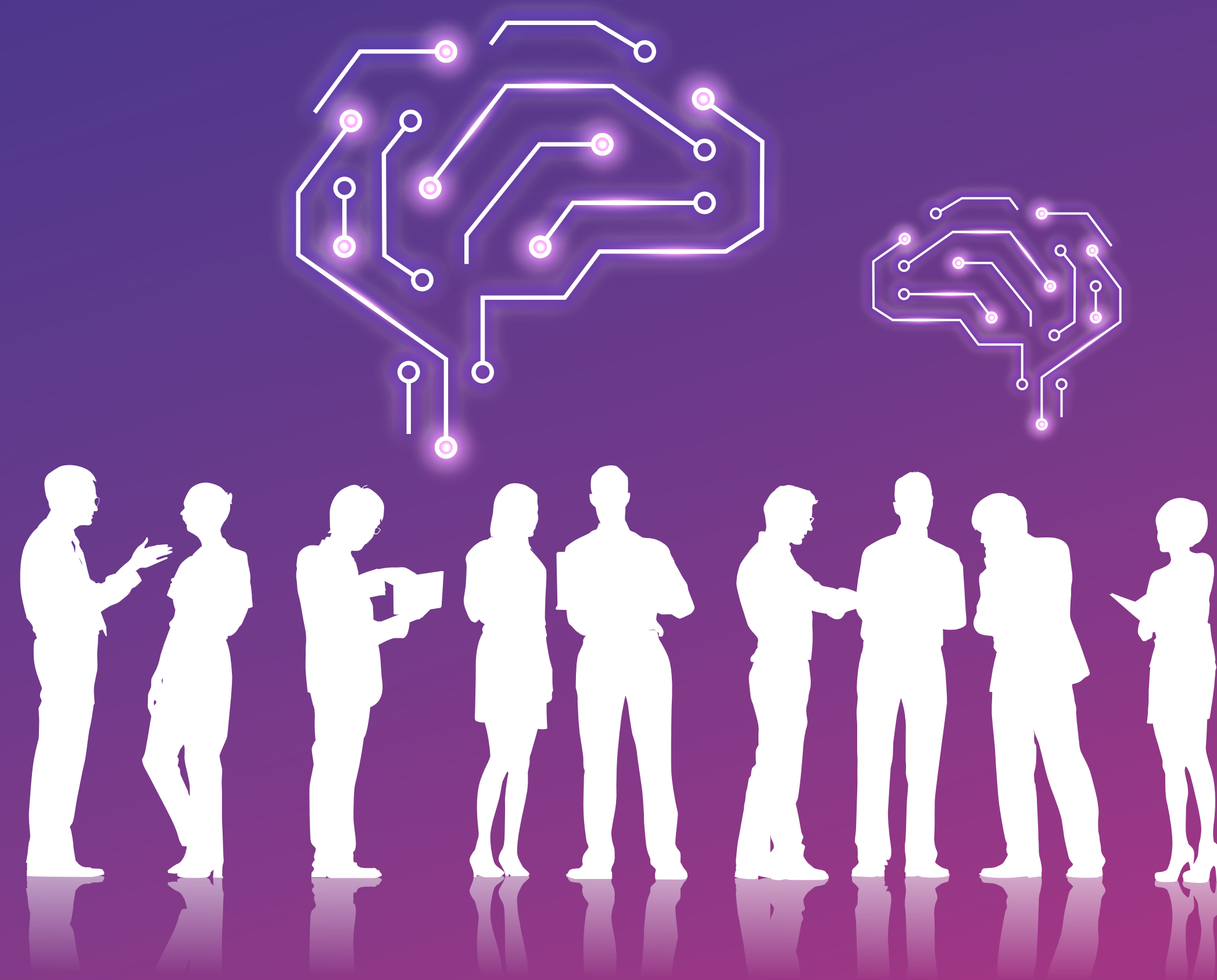
Leveraging the Appropriate Market Tools for AI Implementation

Organizations do not need to develop AI solutions from scratch, as a variety of market tools are available to streamline AI adoption. These range from foundational programming languages and machine learning frameworks for technical teams to cloud-based platforms and prebuilt AI tools for business users. Companies can also leverage APIs and specialized AI services to integrate AI capabilities into existing workflows without extensive in-house development. Understanding this ecosystem allows businesses to balance flexibility and usability, selecting the right tools for their needs while optimizing resource allocation.



Building an AI Team with the Right Competences

A successful AI team extends beyond data scientists. Effective AI implementation requires collaboration between several technical and business-oriented professionals. For instance, software engineers, data engineers, business managers, and compliance experts. Among these, AI translators (when present) play a role in bridging the gap between technical teams and business stakeholders, supporting the alignment between AI initiatives and business goals, and diffusion. A well-rounded AI team combines technical expertise with business understanding to maximize the chances of building impactful AI systems for the company.



Avoiding Common Pitfalls in Going from Idea to Implementation

Many corporate AI projects fail due to a hype-driven mentality, poor data foundations, and difficulty in scaling AI beyond isolated pilots. Some organizations adopt AI simply in response to strong market pressure, without a clear business reasoning supporting its integration into the company, leading to potentially wasted resources. Others struggle to transition from proof-of-concept projects to full-scale implementations due to challenges such as inadequate infrastructures, resistance to change, and lack of alignment with business processes. The next course of this series by Bocconi University will further develop considerations about the difficulty in transitioning from an AI idea to an AI implementation, providing tools and approaches to maximize the possibilities to generate value out of AI initiatives.

