

# AI IN THE MEDIA AND ENTERTAINMENT INDUSTRY

Striking Cases, Biggest Challenges,  
and Winning Solutions to Bring Your  
AI Idea into Fully-Fledged Solutions



# Contents

Intro	2
Impactful AI Use Cases for Your Media and Entertainment Business	3
Are Media Companies Truly Ready to Adopt AI Technology?	5
Biggest Challenges of Using AI in the Media and Entertainment Industry	6
From Idea to Implementation: Streamline Development of Your AI Project	13
Efficient Tools for Streamlining Your AI Project	16
How DataArt Can Help You Deliver Feasible and Workable AI Solutions	19
Why DataArt is Your Partner for Progress	20

# Intro

Artificial intelligence (AI) is not merely transforming but fundamentally reshaping interactions between companies and customers across media and entertainment sectors. By 2034, the AI market in this industry is projected to soar to a market value of [\\$51.37 billion](#).

By harnessing AI for predictive analytics and precise audience segmentation, media organizations are stepping into a future where every interaction is tailored to enrich the user experience and streamline operations.

// [There's this side of AI](#), which creates efficiencies in the back office and finds the gaps in your existing revenue.

AI is far better at parsing massive amounts of data than any human is. When systems are interconnected inside your organization, AI can help propagate and fill in the gaps between those systems.



**Edward Ginis**

Co-Founder at OpenPlay

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AI technology offers a suite of universal use cases that can significantly enhance operations and audience engagement across various niches in the media and entertainment industry.

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# Impactful AI Use Cases for Your Media and Entertainment Business

## Cross-Industry AI Use Cases

- ▶ AI-powered customer support and AI virtual assistants
- ▶ Automated content generation with personalization, including text-to-image/voice/video and accessibility
- ▶ Personalized recommendations/experience
- ▶ Automatic content translation
- ▶ Automated compliance and copyright checks
- ▶ Prescriptive and predictive analytics
- ▶ Automated rights and permissions management, including metadata processing and royalty calculations

## DataArt's GenAI Solutions Trusted by Leading Companies Worldwide

### Chatbots

- ▶ Helpdesk Chatbot
- ▶ Knowledge Base Chatbot
- ▶ Support Chatbot
- ▶ Call Center Automation

### Document Processing

- ▶ Contracts Classification and Data Extraction
- ▶ Emails Generation
- ▶ Physical Mail Digitalization
- ▶ Automated Annual Report Creation
- ▶ Automate Online Loan Applications

### Smart Search

- ▶ Profiles Recommendation Engine
- ▶ Search Summary
- ▶ Matching Engine
- ▶ Search Explainability
- ▶ Interchange Fee Selection System

### Coding Assistance

- ▶ Legacy Code Migration
- ▶ Documentation Generation
- ▶ Code Explainability.
- ▶ Security Scanning

AI technologies also excel in addressing the unique needs and complexities of different segments within the media and entertainment sector:





## Advertising and Marketing

- 1 Predictive consumer behavior modeling
- 2 Audience segmentation and targeting based on data-driven insights
- 3 Automated A/B testing for ad campaigns and real-time bidding optimization
- 4 Sentiment analysis for brand monitoring
- 5 Dynamic pricing strategies

## Gaming

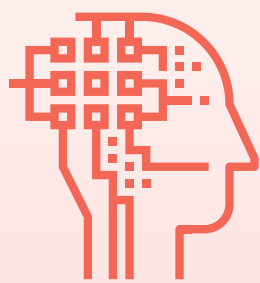
- 1 Creation of more realistic and adaptive non-player characters (NPCs)
- 2 Procedural content generation (levels, quests, etc.)
- 3 AI-powered player engagement (acquisition, retention, etc.)
- 4 Cheat detection and prevention
- 5 Dynamic in-game advertising tailored to player preferences

## Music

- 1 AI-powered music production
- 2 AI-powered collaborative platforms for artists and fans
- 3 AI-powered tools for creating adaptive music scores for games and films
- 4 AI-powered tools for creating interactive and immersive music experiences
- 5 AI-powered voice coaching and training applications

## Art and Museums

- 1 AI-driven interactive installations and AR/VR experiences
- 2 AI-powered suggestions for the preservation and restoration of artworks
- 3 AI-driven provenance research to verify the authenticity of artworks
- 4 Predictive maintenance for museum infrastructure and exhibits
- 5 AI-enhanced educational programs and workshops



## AI Reengineering the Media and Entertainment Industry

## Sports and Betting

- 1 AI-powered solutions to enhance fan interaction
- 2 Automated highlight reel creation from live sports events
- 3 AI models for injury prediction and prevention for athletes
- 4 AI-powered generation of betting coefficients and underlying sports event feeds
- 5 Detecting problematic gambling patterns to promote responsible gaming

## Book Publishing

- 1 Content summarization and visualization
- 2 Automated plagiarism detection
- 3 AI-driven manuscript evaluation to identify promising authors
- 4 AI-based tools for collaborative writing experiences

## Live Entertainment and Events

- 1 AI-powered interactive elements in live performances
- 2 Real-time audience sentiment analysis during live events
- 3 Immersive event experience with AR/VR systems and AI
- 4 Performance simulation to optimize lighting and sound setup
- 5 Enhanced security and surveillance at events

## Video Production and Distribution

- 1 Automated video editing, including compressions and streaming optimization
- 2 Intelligent video summarization and highlight creation
- 3 Real-time facial recognition and emotion analysis in video content
- 4 Intelligent video content moderation and filtering
- 5 AI-powered tools for creating interactive and immersive video experiences



# Are Media Companies Truly Ready to Adopt AI Technology?

Content creators and media companies are harnessing AI to elevate their work. However, broader implications pose challenges, such as creating content from licensed materials, ensuring the integrity and quality of provided

data, and the risk of producing misleading outputs. Navigating the balance between legitimate use and preventing misuse requires robust technical, legal, and regulatory measures.

// The more systems and foundational elements that are in place, the faster we will get to what's yet to come.

It's not just about the technology itself but also about the ethical side of it and the overall preparedness of our data and systems.



**Russell Karp**

SVP at DataArt  
Media & Entertainment



# Biggest Challenges of Using AI in the Media and Entertainment Industry

## Challenge #1: Data Readiness

// I think the question should be, "[Is our data ready?](#)" That's what everyone should be thinking about in preparation for what's next. Data readiness, preparedness, and the fact that you have your content as defined as possible.



**Edward Ginis**

Co-Founder at OpenPlay

Unlike many sectors with rigorous data standards, the media industry lacks a standardized approach. Data comes from various sources such as streaming services, social media, ticketing platforms, and more, each with its own format and standards. This diversity creates a fragmented data environment where metadata, essential for identifying content, creators, and viewership metrics, often lacks consistency and accuracy, posing hurdles for AI algorithms that thrive on clean, reliable data.

## Real Cases

The [merge of Hulu and Disney+](#) highlighted technical issues and brought many development hours due to Hulu being an existing platform with different metadata and encoding approaches:

// While the launch of this will be a simple Hulu button in the [Disney Plus] app, the complexity underneath to deliver that to you has [required] a lot of work. For example, the content libraries between Hulu and Disney Plus – over 70,000 pieces of content – were encoded differently. The playback output had different specifications. The metadata attached to each of those assets was different." – [stated](#) Aaron LaBerge, the president and CTO of Disney Entertainment & ESPN.

Consequently, companies need to rethink and adjust existing business processes and address a myriad of technical issues



before they can seamlessly integrate AI technologies into their daily operations.

### Business Implications

The absence of industry-wide data standards means AI models must be customized for each dataset, increasing the time and cost of development and reducing scalability.

### Solutions: Implementing Entity Matching

The media and entertainment industry represents a complex ecosystem of numerous entities closely intertwined in the creation, promotion, and distribution of content (artists, publishers, record labels, Performers Rights Organizations, recordings, etc.). Implementing entity matching helps media companies maintain data accuracy and integrity and navigate the intricate landscape of rights, royalties, and collaborations.

## Entity Matching Process



### Challenge #2: Lack of Contextual Awareness

The absence of contextual awareness can significantly hamper the effectiveness of AI applications, leading to a lack of personalized experience for users, inaccurate content

recommendations, low-quality content production, or even potentially offensive content.

### Real Cases

In 2023 and 2024, there were several loud cases around AI in the media sector. One of them is the Guardian accusing Microsoft of harming its journalistic reputation.

Microsoft's news aggregator service [added the AI-generated "Guess the cause of death" poll](#) to the article concerning the death of a young water polo coach in Australia. Another incident involves Golden State Warriors Guard Klay Thompson and the X's chatbot. The [chatbot accused](#) Thompson of vandalizing homes in Sacramento after it took the phrase "shooting bricks" (a basketball term for missing shots) too literally, leading to a story about him damaging property.

### Business Implications

Ruined brand reputation, potential lawsuits, and financial losses.

### Solutions

Work closely with domain experts, adopt a proactive strategy for upskilling and reskilling your team to fully leverage the potential of AI, and foster collaboration between AI developers and domain experts to ensure the contextual relevance of AI applications.

Utilize diverse and comprehensive datasets to train AI models: Prompt engineering and in-context learning are essential for maximizing the effectiveness of language

models. These techniques enable the model to produce more relevant, coherent, and context aware responses.

Conduct regular audits to identify and rectify biases, inaccuracies, and gaps in contextual understanding.

As highlighted by Edward Ginis during a [recent round table discussion](#):

// The road to transformation requires vision, education, and innovation.



**Edward Ginis**

Co-Founder at OpenPlay

### Challenge #3: Poorly Trained AI Models & Low-Quality Content at Scale

Generative AI has revolutionized content production, opening manifold opportunities across various industries. Content generation became as rapid as ever, with writers requiring reduced efforts. This, in turn, backfired on the media, flooding the internet with mundane, mediocre content that offers no value to businesses or consumers.

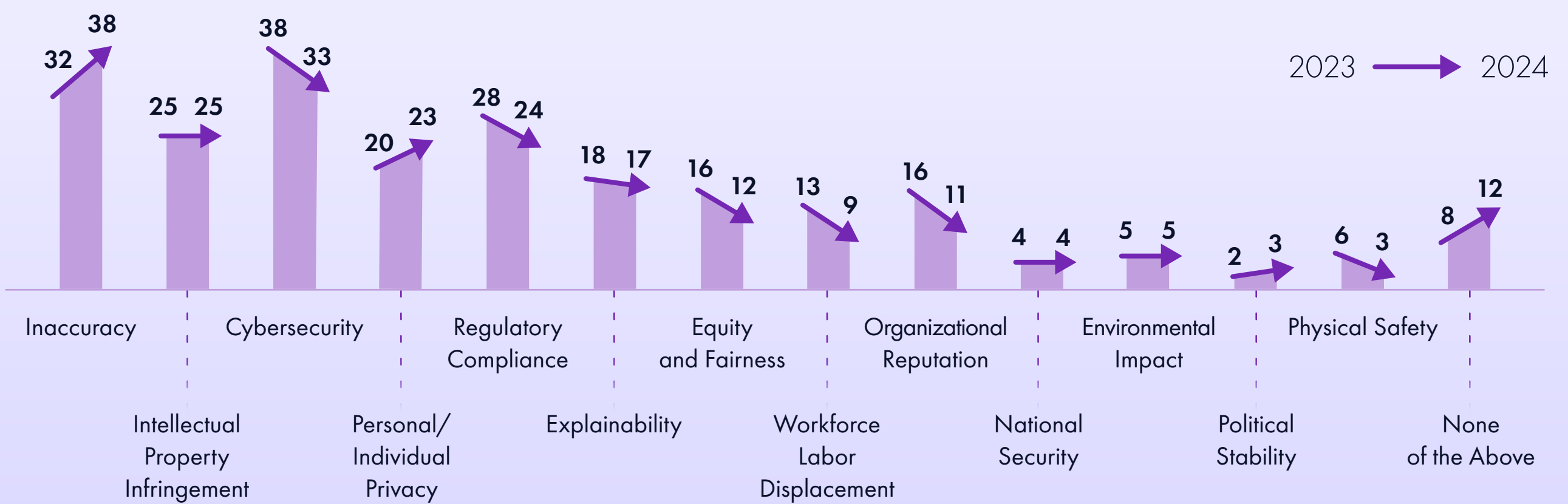


A [survey by McKinsey & Company](#) highlights inaccuracy as one of the most-cited risks associated with the adoption of generative AI.

### Gen AI Risks that Organizations Consider Relevant, % of Respondents



### Gen AI Risks that Organizations Are Working to Mitigate, % of Respondents



## Real Cases

CNET [faced backlash](#) after discreetly publishing numerous AI-generated articles containing factual inaccuracies and apparent plagiarism, leading to corrections for 41 out of the 77 news stories.

## Business Implications

Ethical and financial issues, hampered brand reputation, churned customers.

## Solutions

Collaborate with a reliable tech partner with a robust knowledge of your business domain and existing technologies who can conduct extensive testing and validation of AI models using diverse datasets. Utilize advanced content moderation tools to filter out low-quality or inappropriate content before it reaches end-users and leverage cloud-based platforms for scalable and flexible AI model training and deployment.

## Challenge #4: Copyright Issues

How do you determine whether a music work is created by a human, AI, or a combination of both? What are the copyright laws regarding

content created purely by AI? Traditional copyright laws grant rights to human creators, but AI-generated works challenge this notion.

AI models are often trained on vast datasets that may include copyrighted materials. Using such materials without proper licensing or permission can lead to infringement claims.

// [The key point is that whoever wants to use AI,](#) we want to make sure that the intellectual property holders are compensated fairly for however AI ends up using them.

There are people already working towards a solution in terms of new models coming in data attribution. However, today we have these massive models that already exist that are probably using intellectual property that they did not license.



### Muhammad Qasim

CIO at SESAC Music Group

At the [roundtable devoted to the challenges and opportunities of AI](#) in the media and entertainment industry, Edward Ginis and Kevin Twitchell expressed another copyright issue. Media organizations hesitate to use AI



because they fear unauthorized use of their data and potential violations of data protection laws like GDPR and CCPA.

// [Everyone who owns a copyrighted catalog](#)

wants to make sure that your copyrighted material is what the machine is learning. Because when the copyrighted materials get to the AI system, there goes all your splits and your backend. So the labels are embracing AI technology, but simultaneously are scared that their copyrighted materials are being lost and exploited in the machine training world.



**Kevin Twitchell**

Advisor at DataArt

// [That's exactly the fear.](#) And a lot of it is just not understanding how these large language models work. As I worked with companies at DataArt with a few of our customers, the concerns that we saw were: "You're going to take all of my internal data that I've been collating and competing for the last 30 years, and you're going to process it, and you're going to make it so that my competitors can now use it and train their own models to compete against us."

Not understanding that the data can be bifurcated. You can have the world of the internet in one bucket and your own private data in another bucket, and never the two shall meet. And the model training can be used from one only to benefit the one and not the other.



**Edward Ginis**

Co-Founder at OpenPlay

Media organizations need experts to ensure data governance, manage AI ethics, and implement secure AI solutions. Their expertise will help mitigate risks and enable responsible AI adoption, striking a balance between innovation and data protection.

### Real Cases

An AI-generated song mimicking the voices of Drake and The Weeknd was [submitted for a Grammy](#) award but was ultimately disqualified. This incident has sparked widespread media attention and intensified the ongoing debate about AI-generated music, prompting artists to explore their legal options.

Google [faced a class-action lawsuit](#)

for scraping data from millions of users without consent and violating copyright laws in creating datasets for its language models. The lawsuit seeks a court order for Google to provide users with an "opt-out" option and to delete any previously collected data upon request.

### **Business Implications**

Ethical, legal, and financial issues, blemishing the company's reputation.

### **Solutions:**

- ▶ Ensuring fair, lawful, and ethical training of large language models.
- ▶ Maintaining transparent records of elements used in machine learning.
- ▶ Identifying scenarios in which a human utilizing a generative AI system should be recognized as the "author" of material produced by the system.
- ▶ Establishing content licenses for tech companies applying AI.



# From Idea to Implementation: Streamline Development of Your AI Project

Did you know most AI projects fail or don't add any real value? Harvard Business Review [shares](#) an 80% failure rate. However, media companies can reduce their risk of failure by carefully planning and following a well-defined AI release process.

## Step-By-Step Guide to Launch Your AI Project Without a Hitch

### Set Up Clear Objectives 1

- ▶ Identify business challenges that AI can solve.
- ▶ Set measurable goals for success.

### Evaluate Cloud Providers 2

- ▶ Assess if your current cloud infrastructure aligns with your AI needs.
- ▶ Investigate the AI tools and services offered by your provider.
- ▶ Compare offerings and capabilities with other cloud services if necessary.

### Assess Data Readiness 3

- ▶ Identify business challenges that AI can solve.
- ▶ Set measurable goals for success.

### Select Technology 4

- ▶ Choose the AI models and frameworks that best fit your objectives, considering the strengths of your cloud provider's AI tools.
- ▶ Decide between building in-house solutions or using cloud-based AI services.

## Consider Risks and Establish Ethical Guidelines 5

- ▶ Conduct a risk assessment, particularly for data privacy and model bias.
- ▶ Set up an ethical framework and guidelines for AI usage.

## Prototype Your PoC 6

- ▶ Develop a PoC to validate feasibility.
- ▶ Use feedback loops to refine AI models and outputs.

## Integrate Business Processes 7

- ▶ Align AI outputs with business workflows.
- ▶ Train staff on interacting with AI systems and interpreting their results.

## Assure Compliance and Security 8

- ▶ Ensure the solution meets all legal and regulatory requirements.
- ▶ Implement robust security measures to protect AI systems and data, in line with your cloud provider's security offerings.

## Launch Pilot Program 9

- ▶ Roll out a pilot to a controlled user group.
- ▶ Monitor performance and collect user feedback.

## Measure Performance 10

- ▶ Use predefined metrics to evaluate AI performance.
- ▶ Adjust models and operations based on analytical insights.

## Scale and Optimize 11

- ▶ Gradually scale the solution while continuously optimizing performance.
- ▶ Expand AI applications across the business for greater impact.

## Learn and Adapt 12

- ▶ Establish ongoing learning mechanisms for your AI models.
- ▶ Document insights and lessons learned.
- ▶ Share findings within the organization to foster a culture of innovation.
- ▶ Adapt to new data, feedback, and changing business environments.

## Successful Case: Social Media and Digital News Analytical Tool



### Analytical Tool Application Mockup

#### Solution

DataArt created a solution that helps spot new trends in their early stages by analyzing data from various sources, such as social media and news aggregators.

#### Highlights

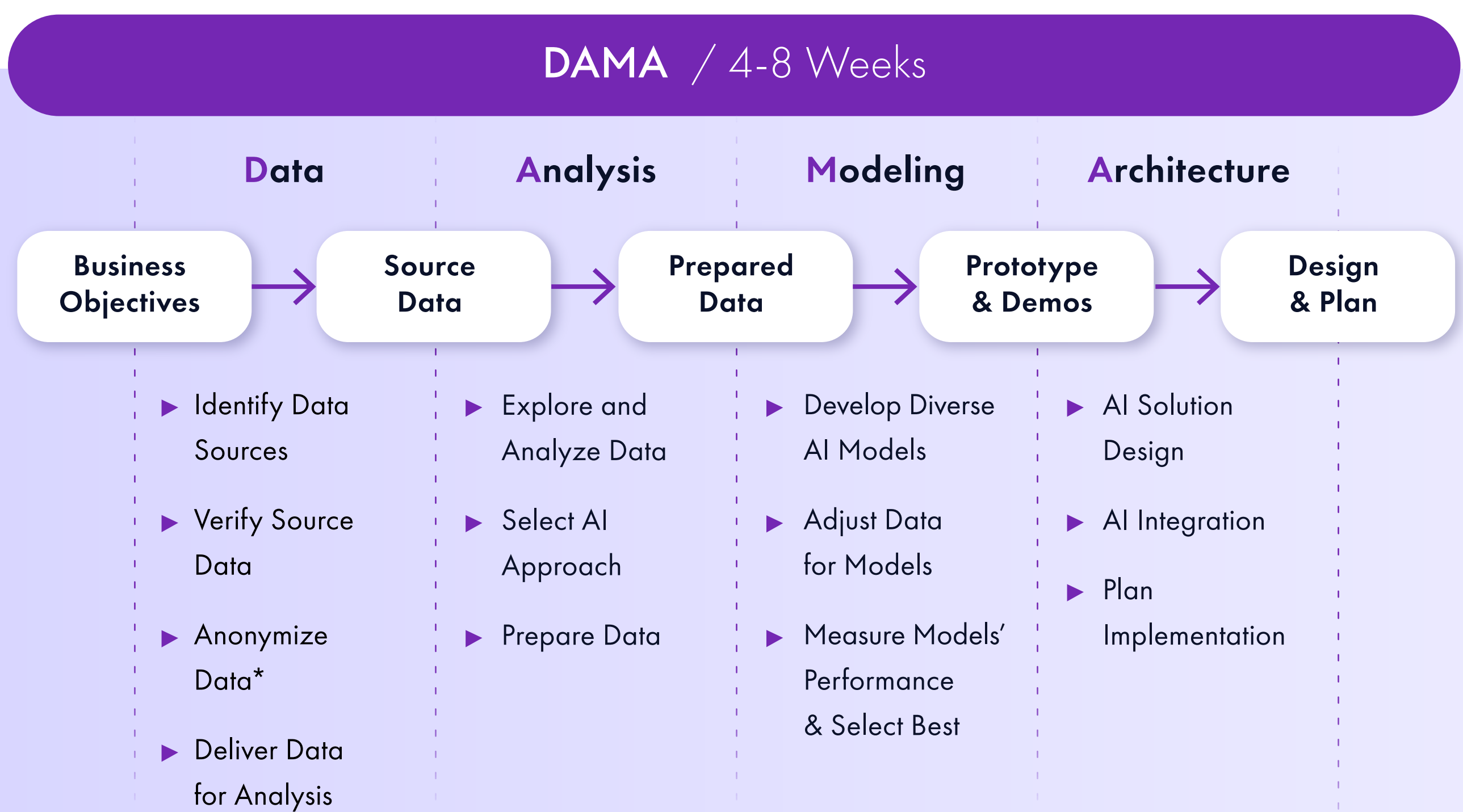
- ▶ Analytics on opinion leaders and target audiences, including sentiment analysis for more accurate planning of budgets and marketing campaigns.
- ▶ Analytics on major social media trends to better understand the target audience, the history of the trend development, and the main influencing factors involved.
- ▶ Dynamics of mentions and reactions to a search query on social media. This offers a more accurate understanding of trend development and major patterns.



# Efficient Tools for Streamlining Your AI Project

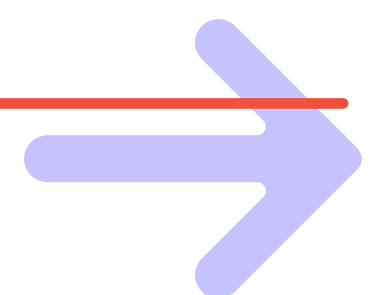
If you want to bring AI into your daily operations faster or if you need a quick validation of your AI idea, you can leverage [MIA-DAMA™](#).

DataArt introduced MIA-DAMA™, an AI framework that turns your initial AI idea into a validated proof-of-concept in just 6 weeks. See your AI solution in action and assess its feasibility before committing to full-scale implementation.



**4-8 weeks** – Depends on the amount of data and number of business objectives / \* Optional steps

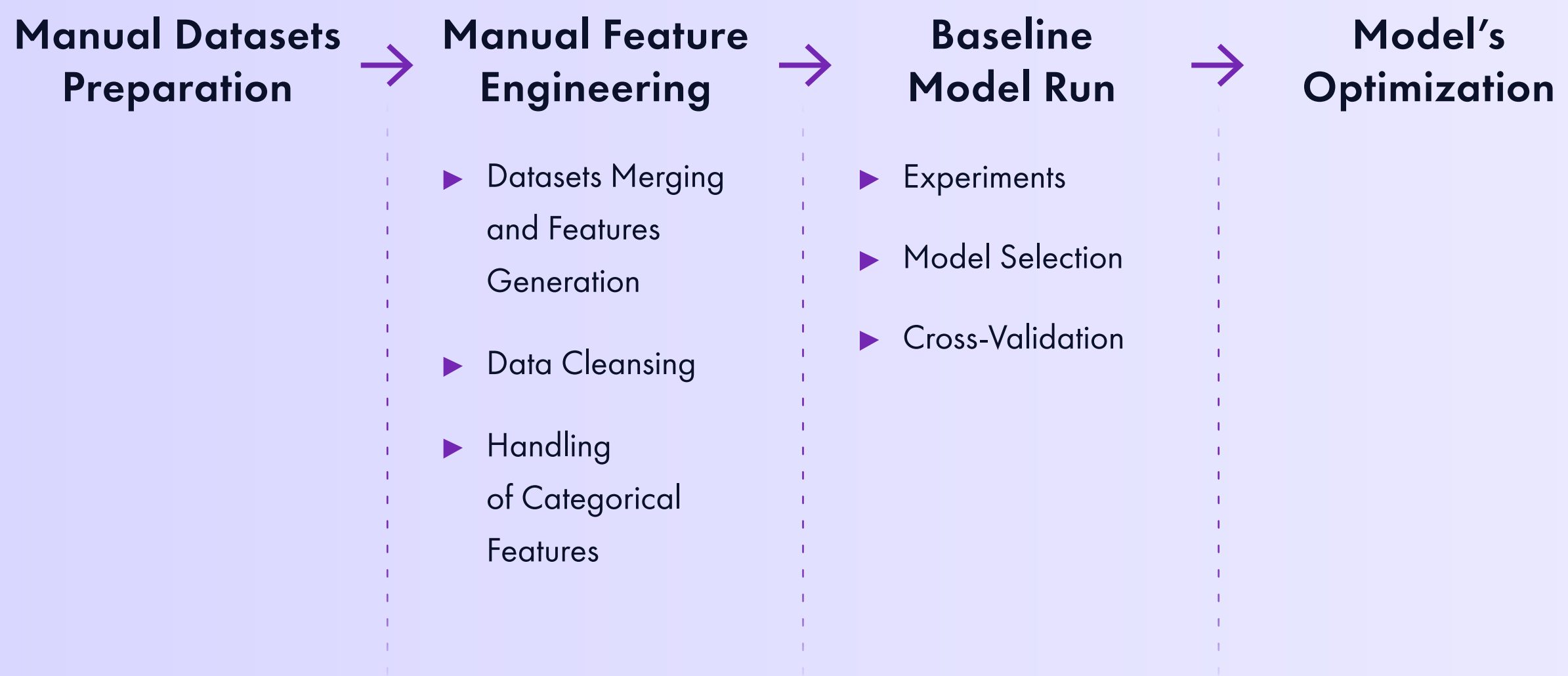
DataArt experts also built [AutoML Platform](#) which provides an intuitive interface for automating complex AI processes.



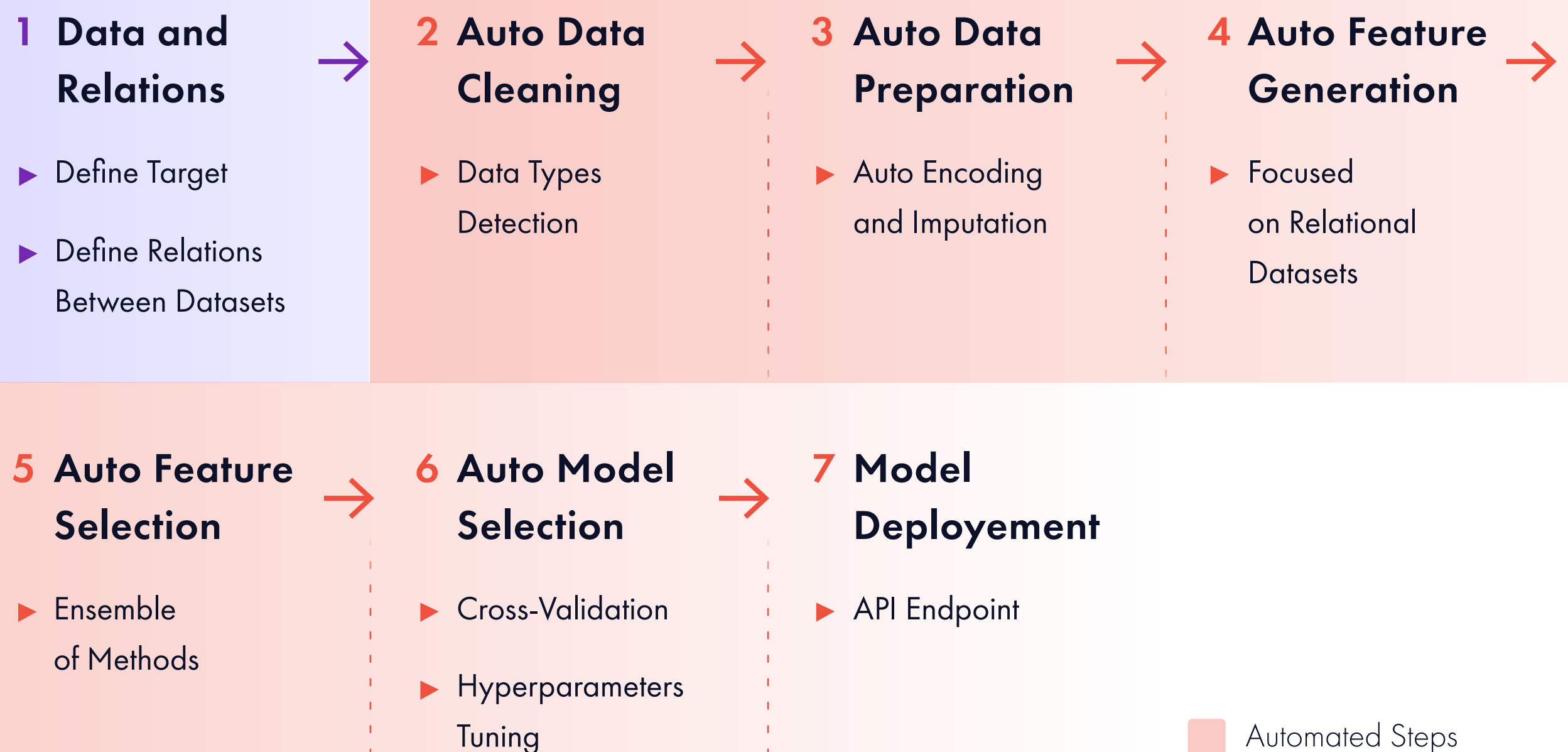
DataArt's AI Platform enables your tech team to develop a working prototype in just 2 days with a fully automated pipeline. With AutoML Platform, you can seamlessly wrap ML models

into an API, integrate them into an existing production environment, and save up to 2X times the cost of implementing your AI initiative.

### Common ML Pipeline / 10-15 Days

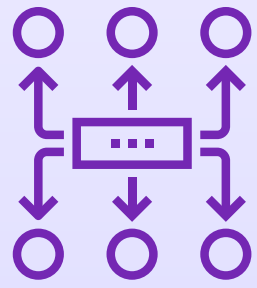


### DataArt AutoML Platform

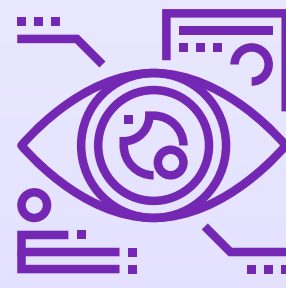


## Successful Case: AutoML

### Prediction Model



**92%**  
Accuracy



**Fast**  
Model  
Development



**Applied**  
Auto Code  
Generation Features

#### Challenge

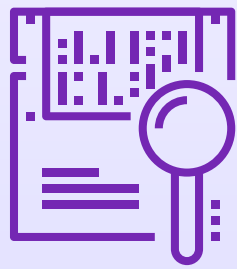
DataArt was hired to build a solution for predicting product item categories based on the textual description, price, warranty value, and other data.

#### Solution Highlights

- ▶ Delivered code prototype in a week.
- ▶ The code was 75% generated by the Auto ML Platform and 25% written by our ML expert.
- ▶ The model can be easily adjusted to solve other tasks. The examples include but are not limited to:
  - Customer Classification/Segmentation
  - CLV Calculation
  - Revenue Prediction
  - Sales Forecasting
  - Price Prediction
  - Customer Review Classification
  - Fraud Detection

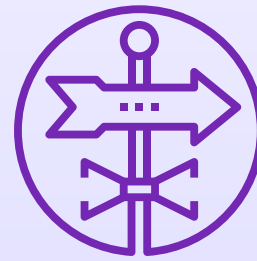


# How DataArt Can Help You Deliver Feasible and Workable AI Solutions



## Full Spectrum AI Readiness Assessment

Receive a thorough report detailing your technological strengths, gaps, and actionable insights for AI integration.



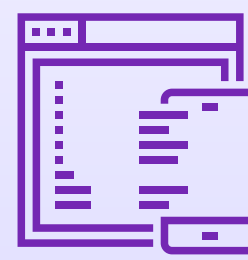
## AI Strategy Consulting

Start your AI journey with a comprehensive strategy that sets clear objectives and guidelines.



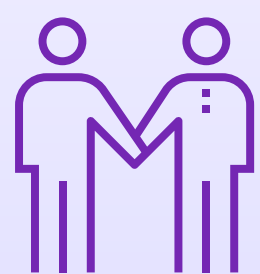
## AI Solutions

Bring your AI idea from an experimentation stage into a robust, scalable solution solving a real-life problem.



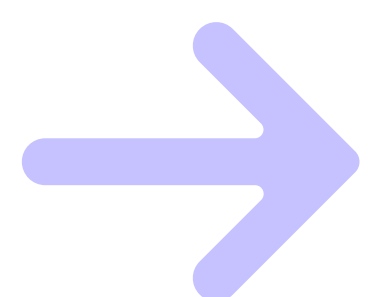
## AI Platform

Manage all your AI initiatives under one roof. Centralize and streamline your AI operations with a secure, compliant platform.



## Long-Term Advisory and Partnership

Get all your AI needs covered: from ideation to maintenance and ongoing improvement of your scaled enterprise solutions.



# Why DataArt is Your Partner for Progress

DataArt is a full-service software engineering firm and the trusted technology partner of market leaders. Our company stands at the forefront of digital transformation, offering a unique blend of global scale, dedicated industry practices, and cutting-edge innovation. With [20 domain-focused innovation Labs](#), we are committed to designing and engineering data-driven, cloud-native solutions with speed, quality, and precision.

## Quick Facts:

- ▶ Trusted by 400+ clients worldwide
- ▶ 13 times recognized as Inc. 5000 Fastest-Growing Private Company. Only 0.1% of Inc. 5000 companies have been recognized 13 times

- ▶ Named a '[Major Contender](#)' in Everest Group PEAK Matrix for Analytics and AI Services 2024
- ▶ 17+ years of experience in building custom Media and Entertainment business solutions
- ▶ 600+ experts with deep Media and Entertainment expertise
- ▶ 120+ AI, ML, and DS engineers worldwide
- ▶ Successfully delivered more than 60 Generative AI PoCs
- ▶ Strong partnerships with AWS, GCP, and Microsoft
- ▶ Achieved Media and Entertainment Expertise in the Netherlands Google Cloud Partner Advantage
- ▶ Partner in AWS ML Fast Start program, allowing companies to experiment with GenAI without spending money on nonworking solutions

