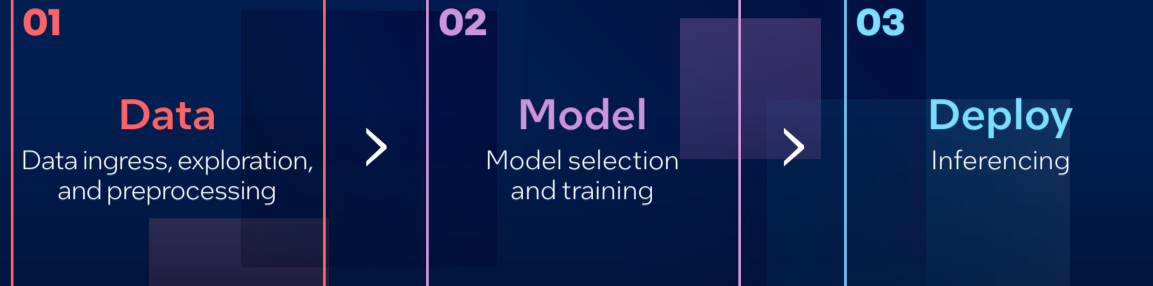intel

Optimize enterprise AI results with Intel

Across data prep, training, and deployment, taking an enterprise artificial intelligence (AI) solution from concept to production to integration can be a challenging journey.

"Only **54%** of AI projects make it from pilot to production."[1]

Intel® technologies and tools can help accelerate innovation and maximize value for critical enterprise AI workloads, including computer vision inferencing, generative AI, and large language models.

Accelerate the end-to-end enterprise AI development cycle

Intel provides a comprehensive portfolio of AI solutions, including hardware and software, to help you deliver the AI results required for today's emerging AI use cases. Get the solutions needed to accelerate innovation and maximize value.

01 Data
Data ingress, exploration, and preprocessing

>

02 Model
Model selection and training

>

03 Deploy
Inferencing

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01 Data

Take advantage of optimized tools and high-performance processors for fast data preparation

Data prep is one of the most critical parts of the AI development cycle—and it can be a time-consuming and difficult part of working in AI.[2] Intel offers optimized software resources and workload-matched processors to help streamline, simplify, and accelerate data preparation efforts.

Increase performance for data science workloads

5th Gen Intel® Xeon® Scalable processors deliver AI training and inference performance up to

14x better

vs. 3rd Gen Intel® Xeon® Scalable processors[3]

Why Intel for data prep?

Cut **hours** off the most-time-consuming data science tasks with Intel® processors that can run medium to large datasets in memory.

Build AI faster with ML frameworks, such as scikit-learn and XGBoost, optimized by Intel to **increase their performance on Intel® hardware by 10x to 100x.**[4]
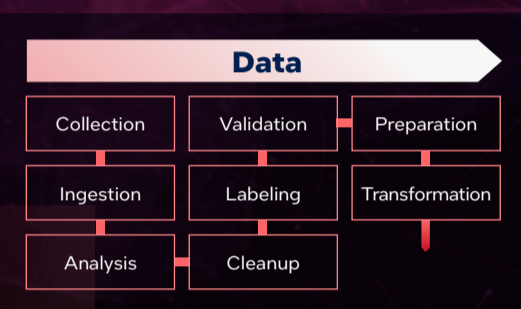
Simplify and speed up data workflows

Data		
Collection	Validation	Preparation
Ingestion	Labeling	Transformation
Analysis	Cleanup	

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02 Model

Maximize training performance for a variety of AI initiatives

Training and fine-tuning AI models can take a considerable amount of time, requiring different levels of computing power based on the number of parameters involved. Intel offers a comprehensive portfolio of hardware to accelerate AI training with maximum cost efficiency.

Right-sized hardware for all levels of AI training

Large AI models, frequent retraining, and large inference requirements
- Intel® Gaudi® AI accelerators
- Intel® Xeon® Scalable processors with discrete GPUs

Machine learning, deep learning, or smaller generative AI models
- Intel® Xeon® Scalable processors with Intel® Advanced Matrix Extensions (Intel® AMX) and Intel® Advanced Vector Extensions 512 (Intel® AVX-512)

Accelerate time to market with Intel® data science and development resources

Simplify and optimize AI development with our portfolio of AI software resources, including framework optimizations for TensorFlow and PyTorch, the Intel® oneAPI unified programming model, and the OpenVINO™ toolkit.

Learn about the Intel® Geti™ platform for streamlined inferencing training ›
Discover preoptimized large language models from Intel and Hugging Face ›
Browse all Intel® AI software and data science resources ›

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03 Deploy

Optimize AI inference for faster deployment

When AI models are ready for deployment, Intel® technologies offer an ideal platform that spans AI PCs, edge, cloud, and data center. The combination of hardware and software technologies helps deliver the performance, scalability, and cost efficiency your solution requires.

Did you know?
Intel® Xeon® Scalable processors represent approximately **70%** of the processor units that are running AI inference workloads in the data center.[5]

Optimized deployment wherever it's required

AI PCs
- Intel® Core™ processors
- Intel® Core™ Ultra processors

Edge
- Intel® Xeon® Scalable processors
- Intel® Core™ Ultra processors
- Intel® Data Center GPU Flex Series
- Intel® Arc™ graphics

Cloud and data center
- Intel® Xeon® Scalable processors with integrated accelerator engines
- Intel® Gaudi® AI accelerators
- Intel® Data Center GPU Max Series
- Intel® Data Center GPU Flex Series

Bring AI everywhere with Intel AI solutions

Build and deploy enterprise AI with Intel's full suite of hardware and software technologies for every stage of the development cycle. The breadth, depth, and openness of our AI portfolio gives you the ability to choose the right technology for your AI workloads with less risk and more flexibility.

Learn more about AI, its benefits, and what it means for enterprise businesses by **downloading the Intel AI industry report** or watching our short **Cloud TV episodes on AI.**

Find AI customer solutions and strategies in the **Artificial Intelligence** and **Enterprise AI/Generative AI** Partner Enablement Packages.

And be sure to explore **Intel AI Activation Zones** for curated collections of critical resources, tools and benefit—that can help you build, market, and sell solutions.

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