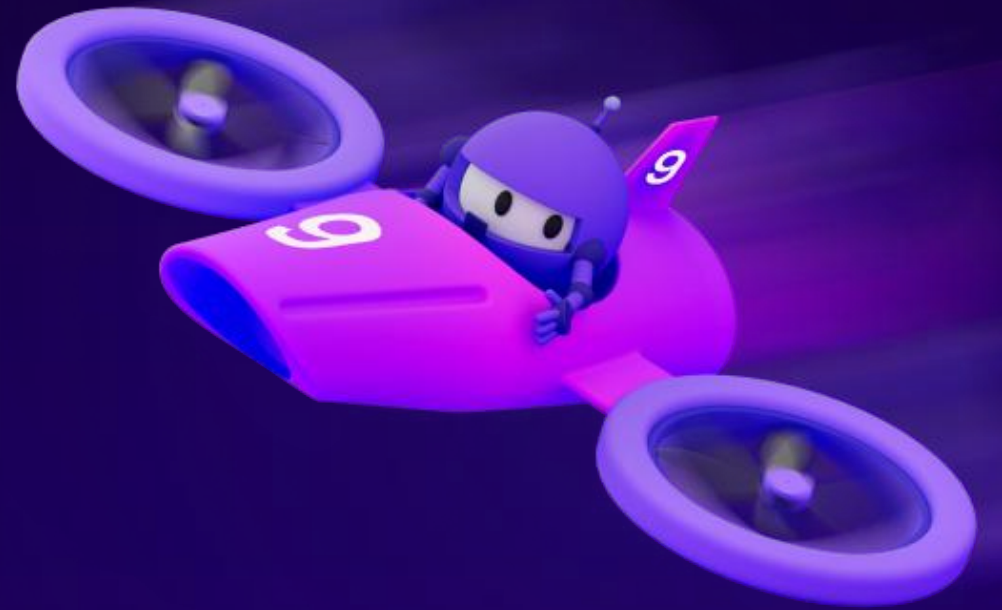
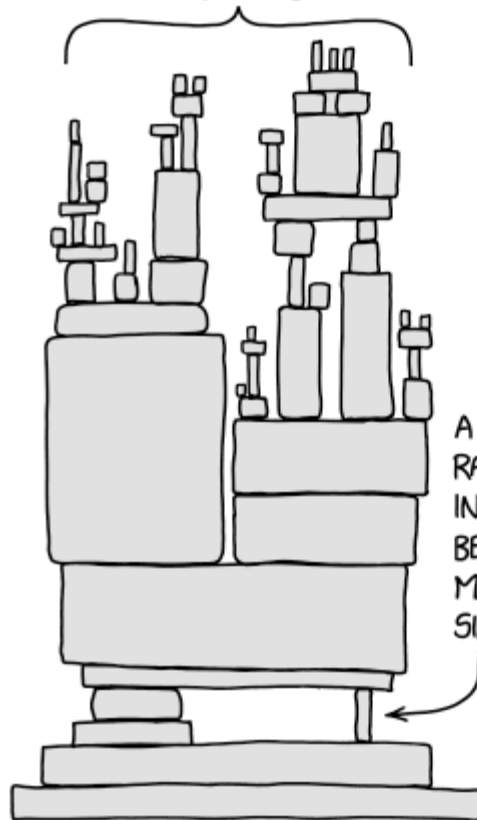


AI Fundamentals in .NET

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ALL MODERN DIGITAL
INFRASTRUCTURE



A PROJECT SOME
RANDOM PERSON
IN NEBRASKA HAS
BEEN THANKLESSLY
MAINTAINING
SINCE 2003

AI Fundamentals in .NET

.NET Application

ML.NET

Semantic Kernel

AI SDKs and Frameworks

AI SDKs

Vector Store
SDKs

ONNX Runtime

TorchSharp

LightGBM

DataFrame

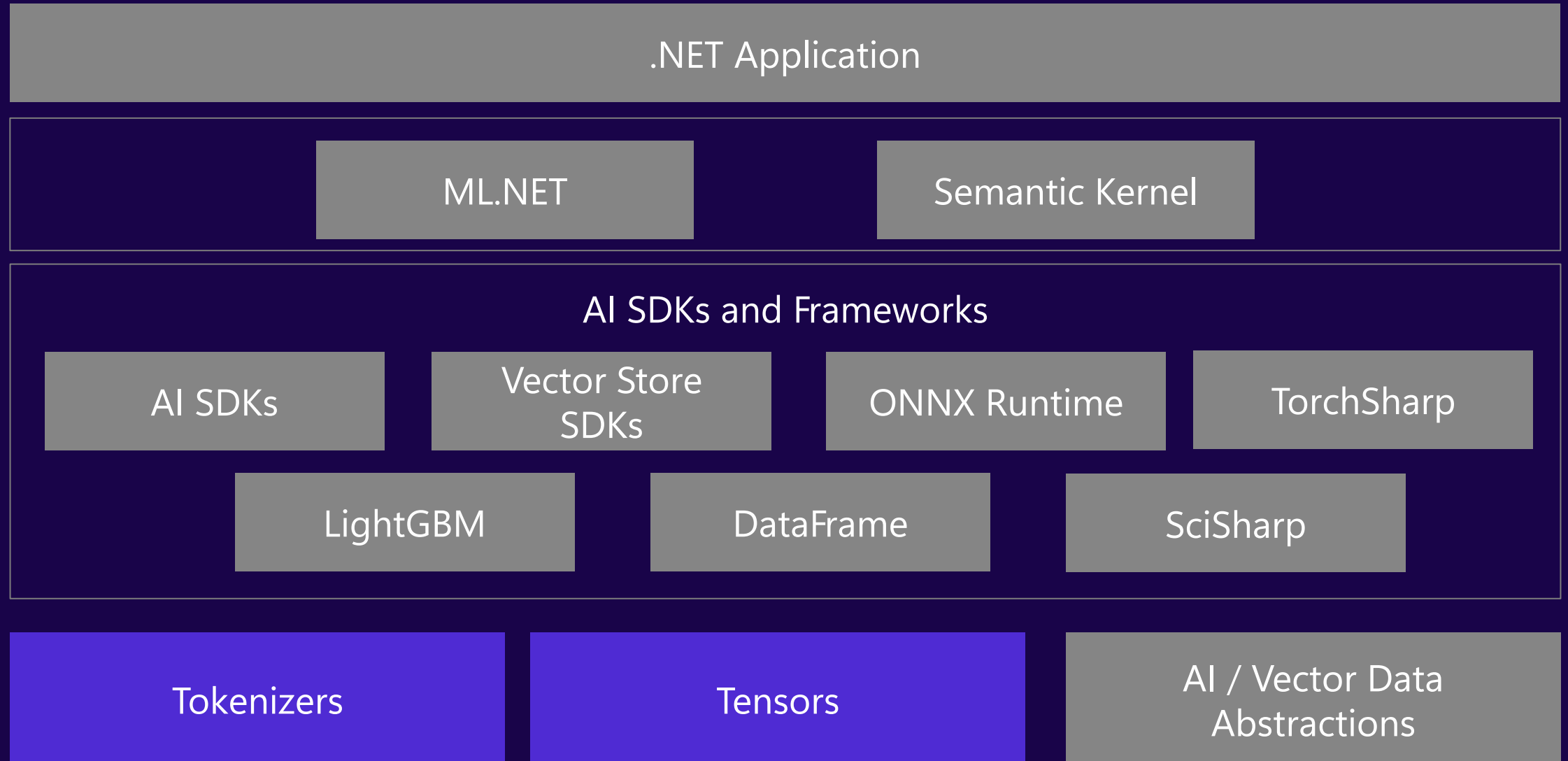
SciSharp

Tokenizers

Tensors

AI / Vector Data
Abstractions

AI Fundamentals in .NET



New in .NET 9

Tokenizers

- Tiktoken
 - GPT (3,3.5,4,4o,o1)
 - Llama 3
- SentencePiece
 - Llama 2
 - Mistral
- Codegen
 - Phi 2
 - Codegen
- WordPiece
 - BERT-based models

TensorPrimitives

- Nearly 200 overloads for mathematical operations
- SIMD-optimized for better performance.
- Generic overloads

Tensor<T> (Preview)

- Built on top of TensorPrimitives
- Seamless interop between AI libraries
- Easy and efficient data manipulation of multi-dimensional data



Get .NET 9



Download .NET 9
aka.ms/get-dotnet-9

Resources

Docs: aka.ms/dotnet/ai/docs

Samples: aka.ms/dotnet/ai/samples

Thank you

