# DEEP DIVE INTO AI INNOVATIONS

with .NET 9 and GitHub Models



Dual Microsoft MVP (AI & Azure)





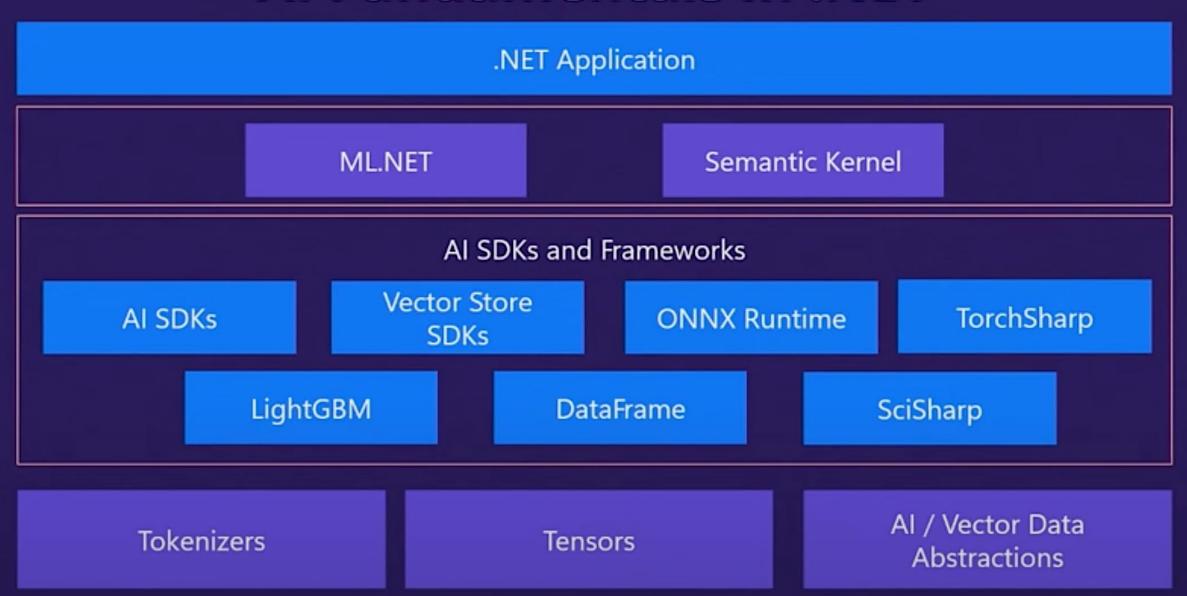
@m3rtyeter



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## Al 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 Al libraries
- Easy and efficient data manipulation of multidimensional data

```
mirror_object
peration == "MIRROR_X":
mirror_mod.use_x = True
mirror_mod.use_y = False
mirror_mod.use_z = False
 _operation == "MIRROR_Y"
Irror_mod.use_x = False
irror_mod.use_y = True
### Irror_mod.use_z = False
  operation == "MIRROR_Z"
  rror_mod.use_x = False
  lrror_mod.use_y = False
  lrror_mod.use_z = True
  election at the end -add
  ob.select= 1
   er_ob.select=1
ntext.scene.objects.act
   er ob.select=1
  "Selected" + str(modification
   irror ob.select = 0
 bpy.context.selected_obj
   lata.objects[one.name].sel
  int("please select exaction
  -- OPERATOR CLASSES ----
```

x mirror to the selected
ject.mirror\_mirror\_x"
ror X"