**AI FOR SOFTWARE WEEK 3 ASSIGNMENT**

Q1: TensorFlow vs PyTorch

TensorFlow uses a static computation graph suitable for production and deployment, while PyTorch uses a dynamic graph ideal for research and experimentation.

Use TensorFlow for large-scale or mobile deployment.

Use PyTorch for flexibility and rapid prototyping.

Q2: Jupyter Notebook Use Cases

Model Prototyping: Enables interactive coding, testing, and visualization of AI models.

Documentation: Combines code, results, and explanations for clear reporting and sharing.

Q3: spaCy vs Basic String Operations

spaCy provides advanced linguistic features such as tokenization, POS tagging, lemmatization, and NER, allowing deeper text understanding.

Basic Python string operations only perform simple manipulations without contextual or linguistic analysis.