Module 3 – Tools of the Trade - Overview

The third module includes the "**Tools of the Trade**" for computer vision. In this module, we explored essential libraries, frameworks, and development environments. I got to work with and experiment on very useful libraries like OpenCV, TensorFlow, and PyTorch for handling images and building deep learning models. Then, we checked out frameworks like Keras and Caffe, which make setting up machine learning models a breeze. For development environments, we learned about Jupyter Notebooks and Labs for interactive coding, Google Colab for cloud-based work, and AWS Sagemaker and Azure AI for complex machine learning tasks. GitHub helps with version control and collaboration, and GitHub Copilot offers smart code suggestions. These tools make developing computer vision projects faster, more accurate and fun to work with. Here are some key points I learned during this module.

* **Essential Libraries for Computer Vision**: Hands-on experience with OpenCV, TensorFlow, and PyTorch for image processing and deep learning models.
* **Frameworks for Machine Learning Models**: Utilized Keras and Caffe to simplify setting up and training machine learning models.
* **Development Environments**: Interactive coding with Jupyter Notebooks and Labs. Cloud-based development with Google Colab. Advanced machine learning tasks with AWS Sagemaker and Azure AI.
* **Version Control and Collaboration**: Using GitHub for version control and team collaboration. Leveraging GitHub Copilot for smart code suggestions.