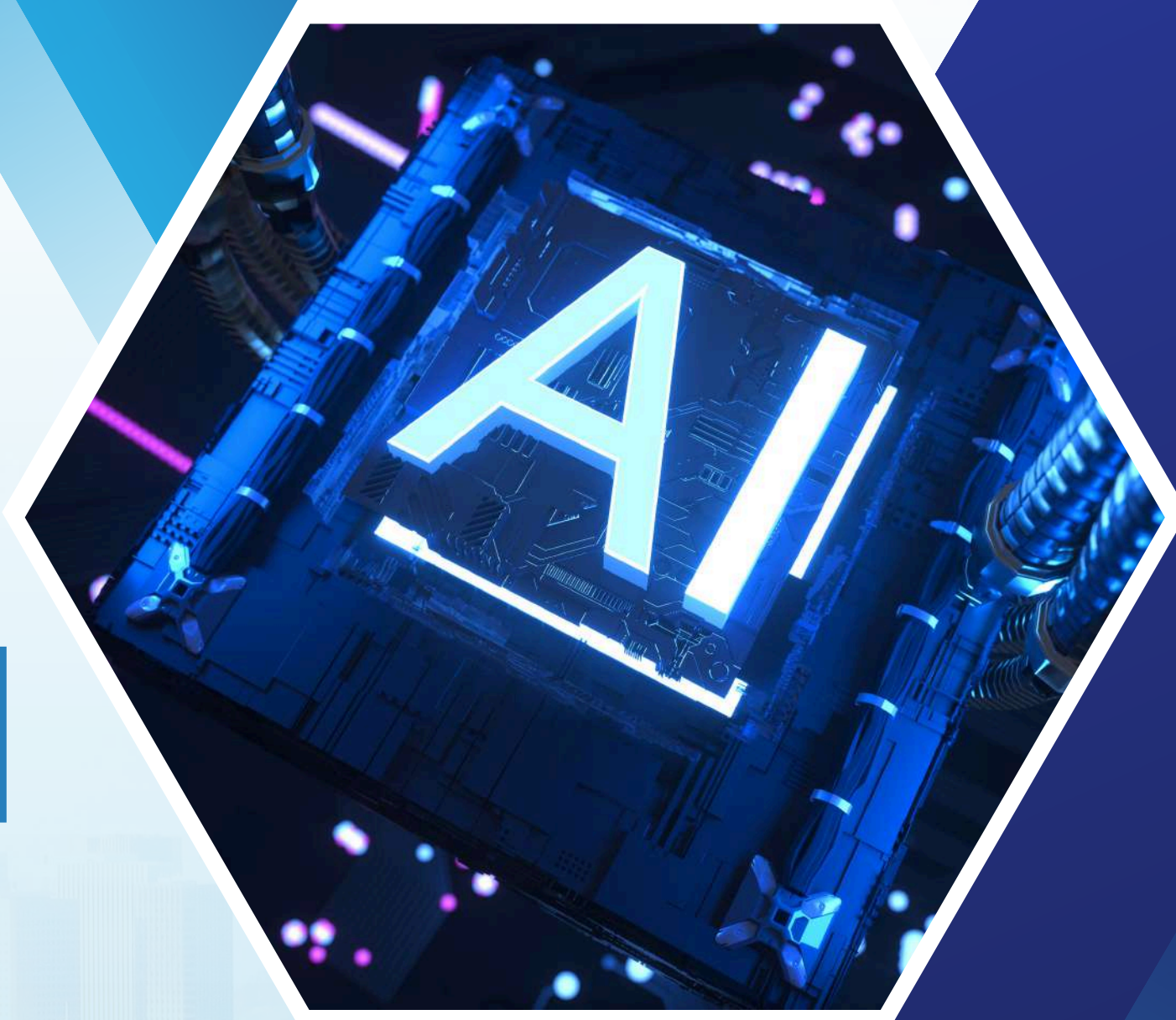




Forge your ambition

INTERNSHIP PROGRAM ARTIFICIAL INTELLIGENCE



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DURING YOUR INTERNSHIP TENURE,

IT IS IMPORTANT TO KEEP IN MIND THE FOLLOWING POINTS

1

Enhance Your Professional Presence

- Update your LinkedIn profile.
- Share achievements such as your offer letter or internship completion certificate.
- Mention and tag Hunar Intern Company in your posts.
- Use hashtags like #HunarIntern, #HunarTech, #HunarCompany to showcase your affiliation.

2

Maintain Academic Integrity

- Respect intellectual property.
- Avoid plagiarism and copying code.
- Understand that violations can lead to the termination of your internship and subsequent restriction from future opportunities with us.

3

Demonstrate Your Work

- Share a video showcasing the completion of your tasks on LinkedIn.
- Tag Hunar Intern Company in your post.
- Use relevant hashtags like #HunarIntern, #HunarTech, #HunarCompany to engage with our community.

4

Engage with the Community

- Participate in company events and activities.
- Connect with fellow interns and colleagues.
- Join and contribute to discussions on company forums and social media Groups

- Create a new GitHub repository with the name Hunar Intern and upload your task on it.
- Create a professional video showcasing your internship projects and Achievements
- Host the video on LinkedIn to provide proof of your work and establish credibility among your peers. Consider tagging hunar intern in your posts to ensure they are notified of your work.
- A SUBMISSION FORM will be shared later. Till then please continue your task and make a separate file of each level.
- When posting the video on LinkedIn, include the following hashtags to maximize visibility and engagement: #hunarintern #hunarTech. Additionally, depending on your Internship Domain

SUBMISSION



Cat and Dog Image Classifier



TASK: 4



LEVEL: Hard



DESCRIPTION

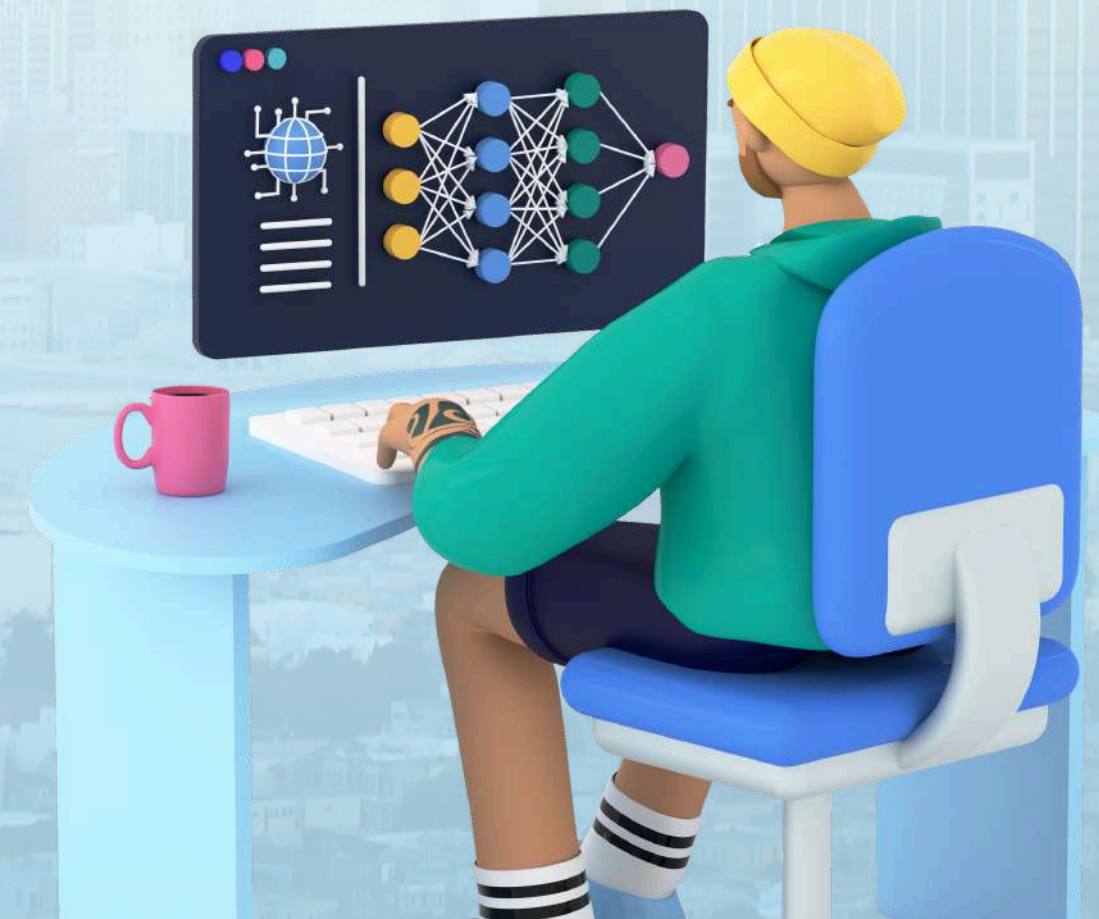
Develop an image classification model to distinguish between images of cats and dogs using data science techniques in Python.



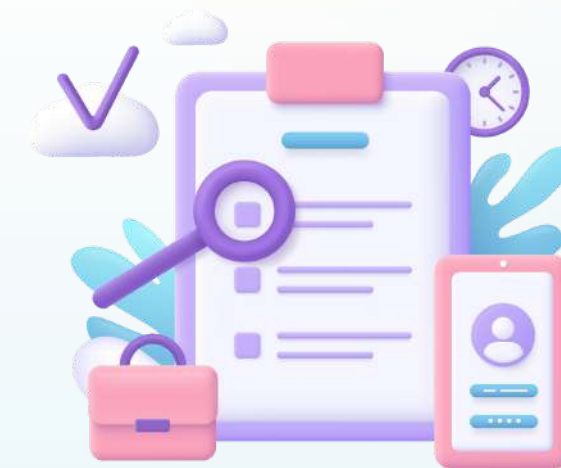
REQUIREMENTS

Understanding of Python and libraries like Pandas and NumPy.

Jupyter Notebook or any Python environment.



STEPS TO FOLLOW



1

Collect a Dataset:

Gather a diverse dataset containing labeled images of cats and dogs. Ensure a good balance between the two classes.

2

Data preprocessing:

- Resize images to a consistent size, normalize pixel values, and perform data augmentation (e.g., rotation, flipping) to increase dataset variability.
- Divide the dataset into training, validation, and test sets to evaluate the model's performance.

3

Model Training:

- Select a suitable deep learning architecture.
- Train the model on the training dataset using an appropriate optimizer and loss function. Monitor performance on the validation set to avoid overfitting.

4

Evaluate the Model:

Evaluate the model on the testing set using metrics such as accuracy, precision, recall, and F1 score. These metrics help assess the model's ability to correctly classify spam and non-spam emails.

5

Testing:

Assess the model's performance on the test set to understand its generalization capabilities..

GUIDELINES



What You'll Learn:

By developing a cat and dog image classifier, you'll learn image processing, deep learning fundamentals, model architecture, training, optimization, evaluation metrics, data splitting, deployment considerations, fine-tuning, and real-world application, giving you practical skills in computer vision.

ADDITIONAL SUGGESTIONS(OPTIONAL):

Explore methods for interpreting and explaining model predictions. ✓
Extend the classifier to handle more than two classes for broader applications ✓





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CONCLUSION

This project provides hands-on experience in machine learning concepts by creating a simple yet interactive image classifier.

