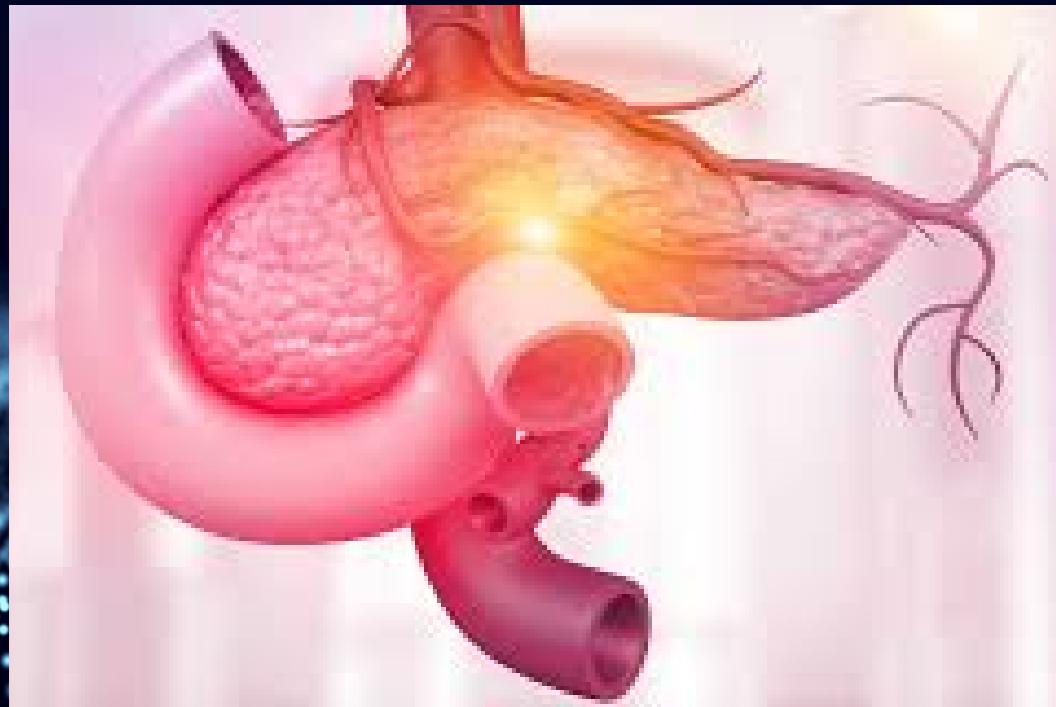


SHRI VISHNU ENGINEERING COLLEGE FOR WOMEN
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Pancreatic Cancer using Deep Learning

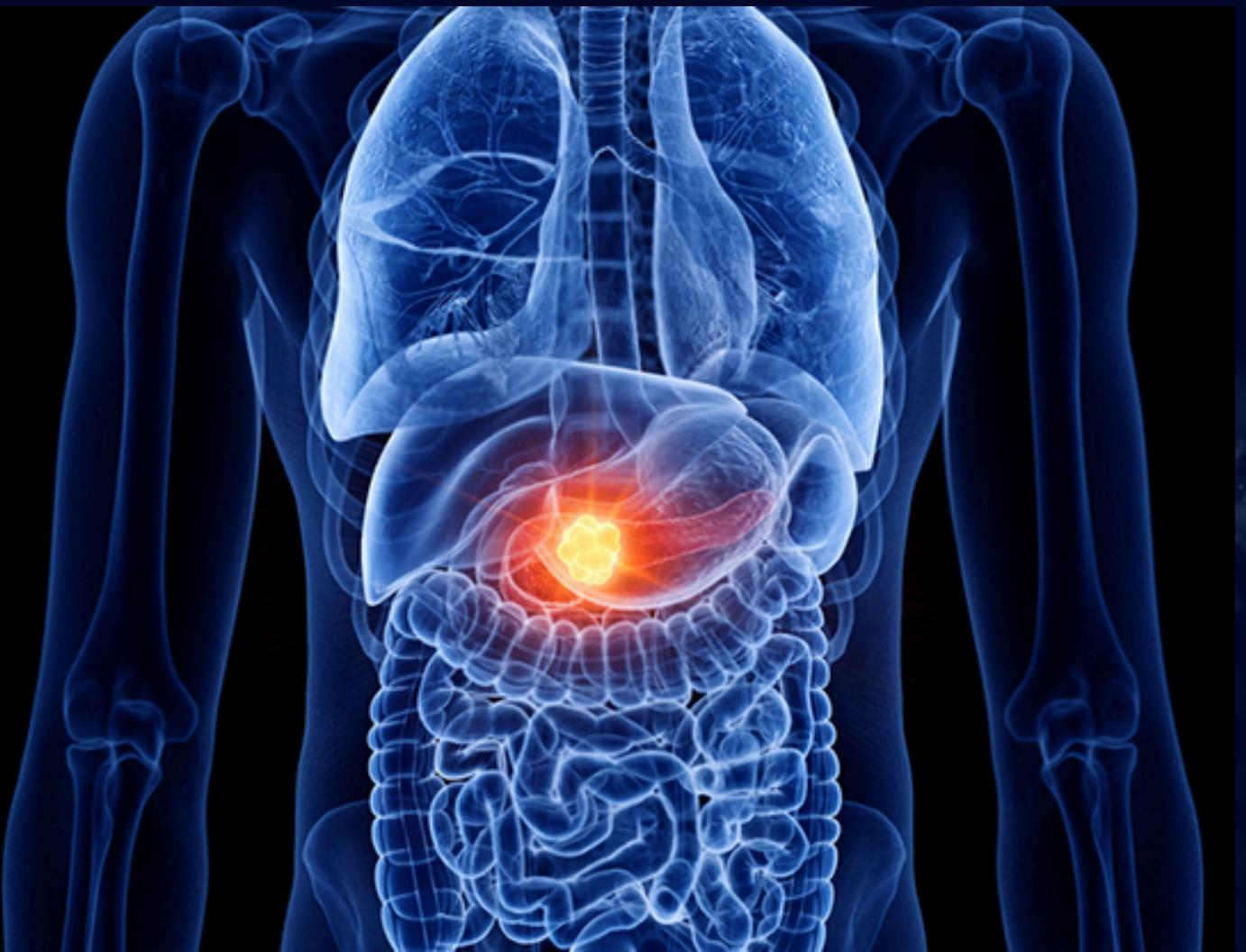
PROJECT GUIDE:
Dr. N. Silpa

Presented by:

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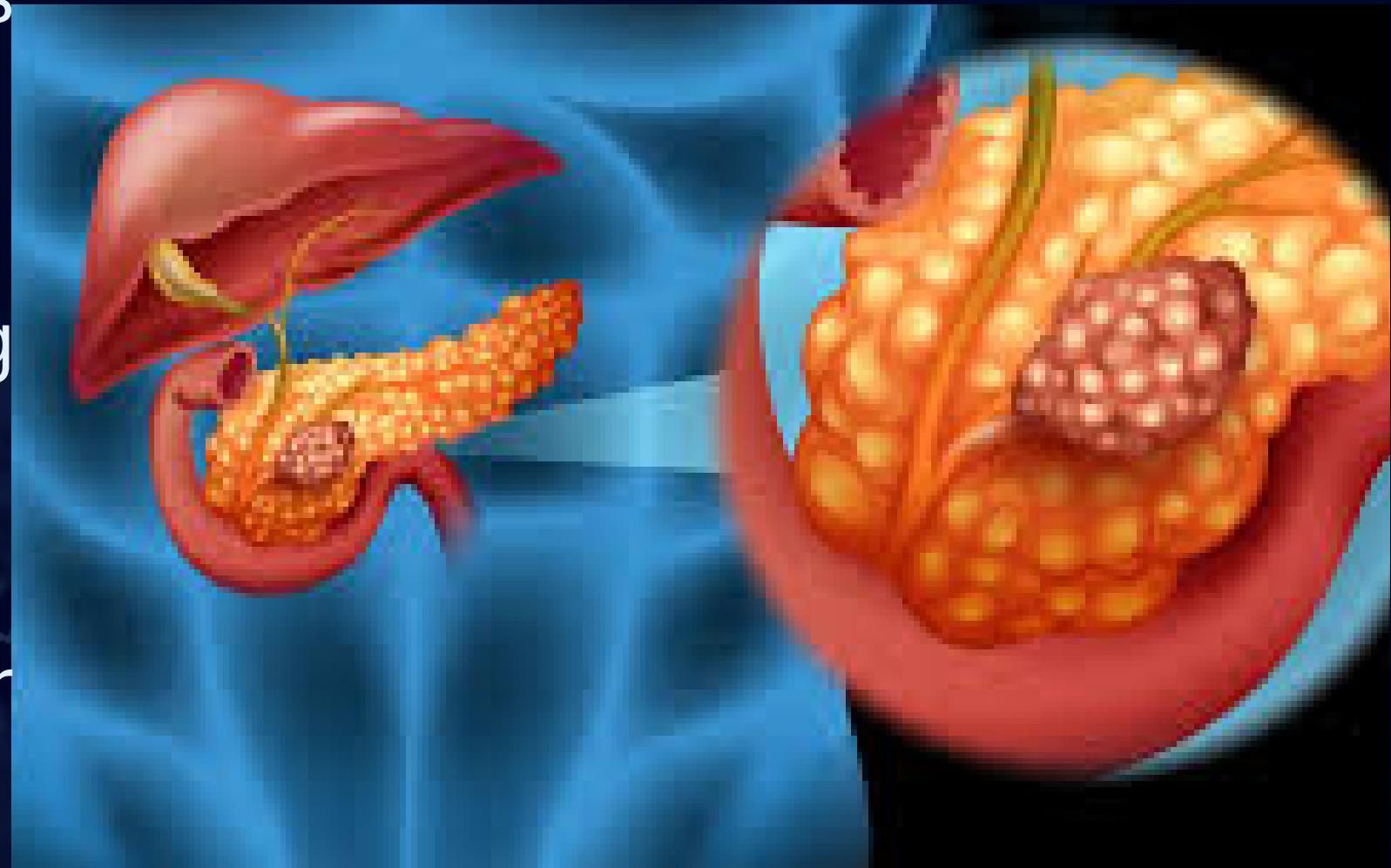
Abstract

Pancreatic Cancer remains one of the most lethal malignancies, largely due to its asymptomatic progression in the early stages and the lack of effective early detection tools. By the time clinical symptoms manifest, the disease has often advanced to an unresectable stage, severely limiting treatment options and survival rates. This Project aims to address this critical challenge by employing state-of-the-art deep learning techniques to analyze computed tomography(CT) images for the early detection of pancreatic tumors.



Introduction

- Pancreatic cancer is among the deadliest forms of cancer with very low survival rates.
- Early detection plays a crucial role in improving patient outcomes.
- Our project aims to detect pancreatic cancer using deep learning techniques on CT images.



Literature Survey

- Used CT scan images to detect pancreatic cancer using deep learning.
- Applied image preprocessing techniques (resizing, normalization).
- Used MobileNetV2 model with transfer learning for image detection.
- Avoided segmentation or graph-based approaches.
- Focused only on detection of affected images.



Methodologies

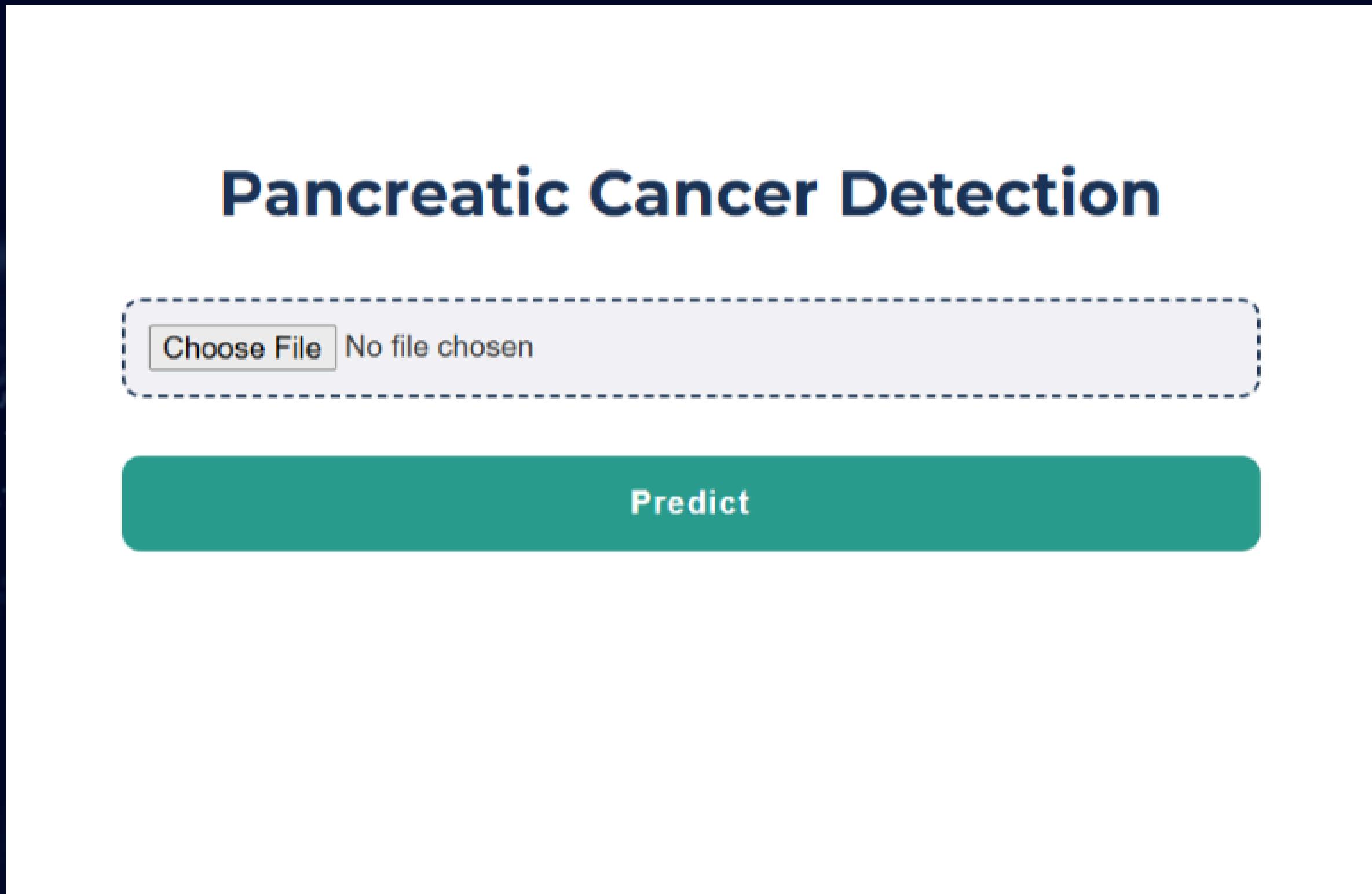
- **Data Collection** – Kaggle CT image dataset
- **Preprocessing** – Resizing, scaling images
- **Model Building** – MobileNetV2 using transfer learning
- **Training** – On preprocessed data
- **Evaluation** – Accuracy, precision, recall.



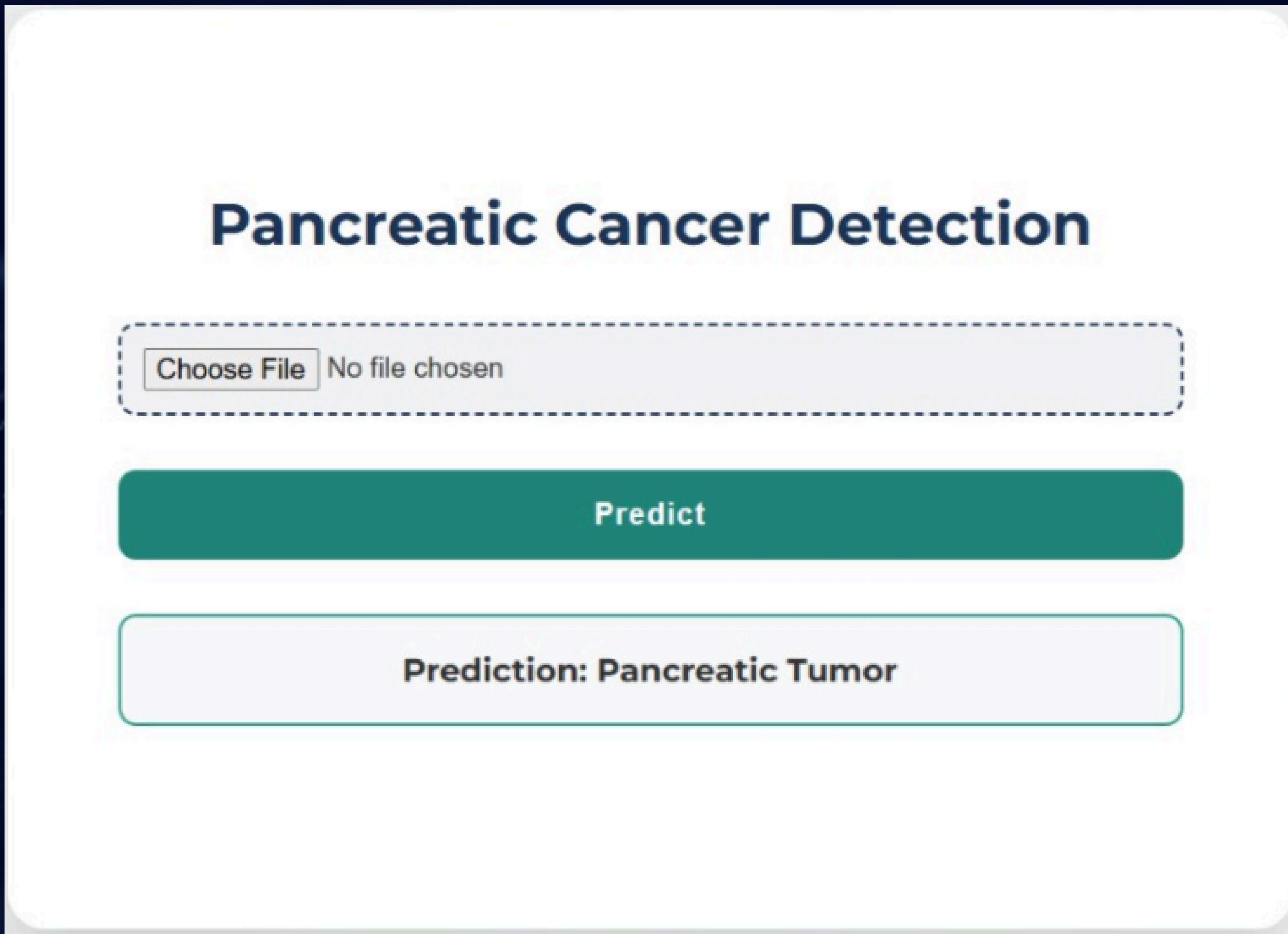
Technologies

- **Programming :** Python
- **Deep Learning :** TensorFlow, Keras, MobileNetV2
- **Image Handling :** ImageDataGenerator
- **Evaluation :** Scikit-learn
- **Web Deployment :** Flask, HTML, CSS

Input Screen



Output Screen



Conclusion

- Deep learning models can assist in early detection of pancreatic cancer.
- Hybrid techniques improved classification performance significantly.
- CT scan-based detection offers a non-invasive, fast screening tool.
- Future work includes larger datasets and real-world clinical testing.



Reference

- Mehta, S. et al. (2021), MobileViT: Light-weight, General-purpose, and Mobile-friendly Vision Transformer, arXiv.
- Litjens, G. et al. (2017), A Survey on Deep Learning in Medical Image Analysis, Medical Image Analysis.
- TensorFlow – Deep learning framework used for model training.
- OpenCV – Library used for image processing.



THANK
YOU

