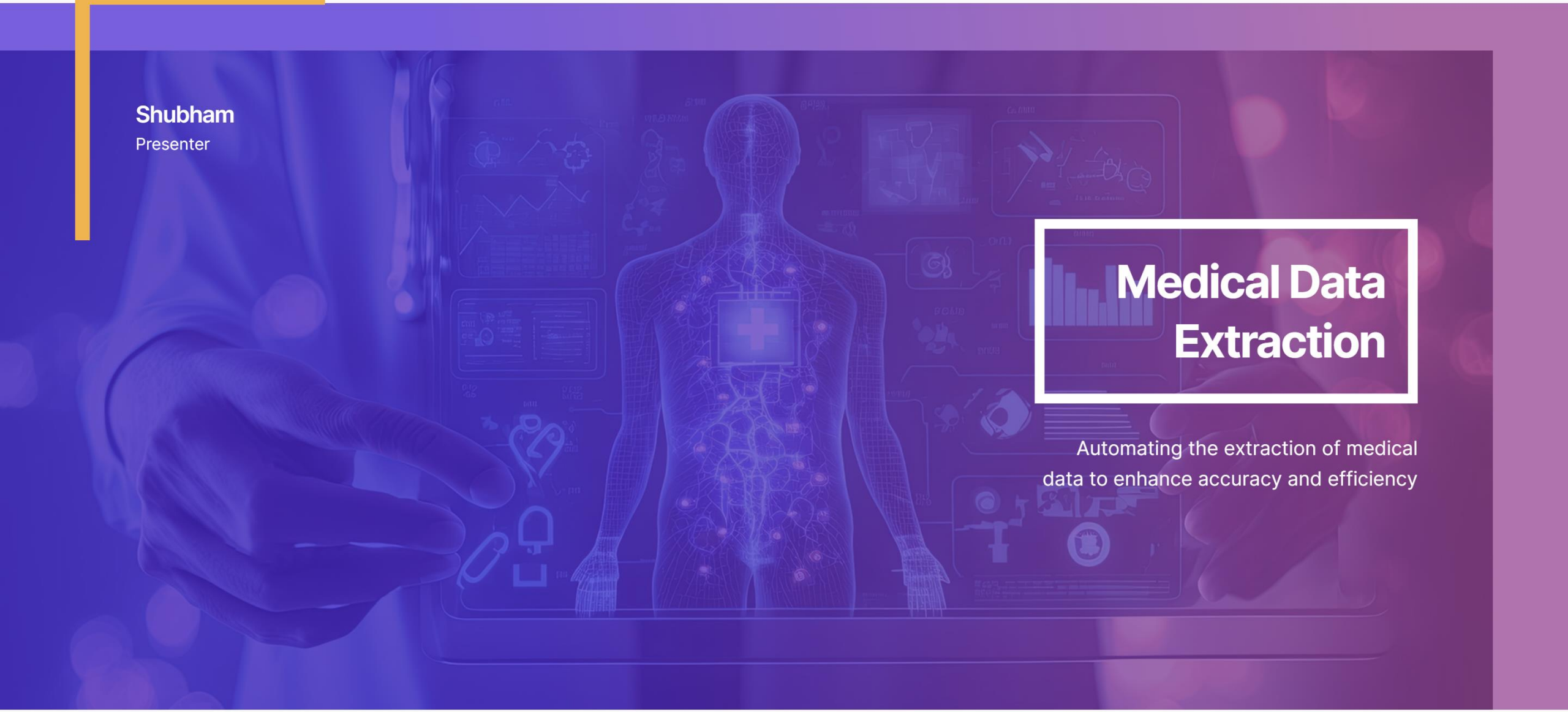
Shubham
Presenter



Medical Data Extraction

Automating the extraction of medical data to enhance accuracy and efficiency

Overview

Automating the Data Extraction Process

Challenge in Claims Processing

Manual extraction of information from patient details and prescriptions

Objective

Automate the data extraction process using Python and various technologies

Benefits

Enhanced accuracy, reduced processing time, and minimized errors

Problem Statement

Challenges in Manual Data Entry

Current Scenario

Reliance on manual data entry for extracting information from scanned patient details and prescriptions

Time-consuming and Error-prone

Manual entry leads to inefficiency and increased chances of errors

Outsourcing Limitations

Impractical during peak times and 24-hour data submission deadlines

Solution Approach

Automated Data Extraction System

Python-based Program

Automation with Human Validation

Utilizes Technologies

Key Features

Enhancing Data Extraction Process

Automation

Extracts patient details and prescription information automatically from medical images

Efficiency

Meets the 24-hour data submission requirement through a faster and automated extraction process

Error Reduction

Human validation cross-checks and verifies the accuracy of extracted data

Technology Stack

Tools and Technologies Used

Technology	Description
Python	The core programming language
Object-Oriented Programming (OOP)	Ensures modular and scalable code design
Pdf2image	Supports the extraction of information from PDF files
OpenCV	Utilized for image processing to enhance data extraction accuracy
pytesseract	Leverages Google's OCR technology for text extraction from images
Regular Expression (Regex)	Facilitates data processing and refining for precise output
pytest	Used for automated testing to ensure code reliability
FastAPI	Enables development of API for seamless integration

How to Use

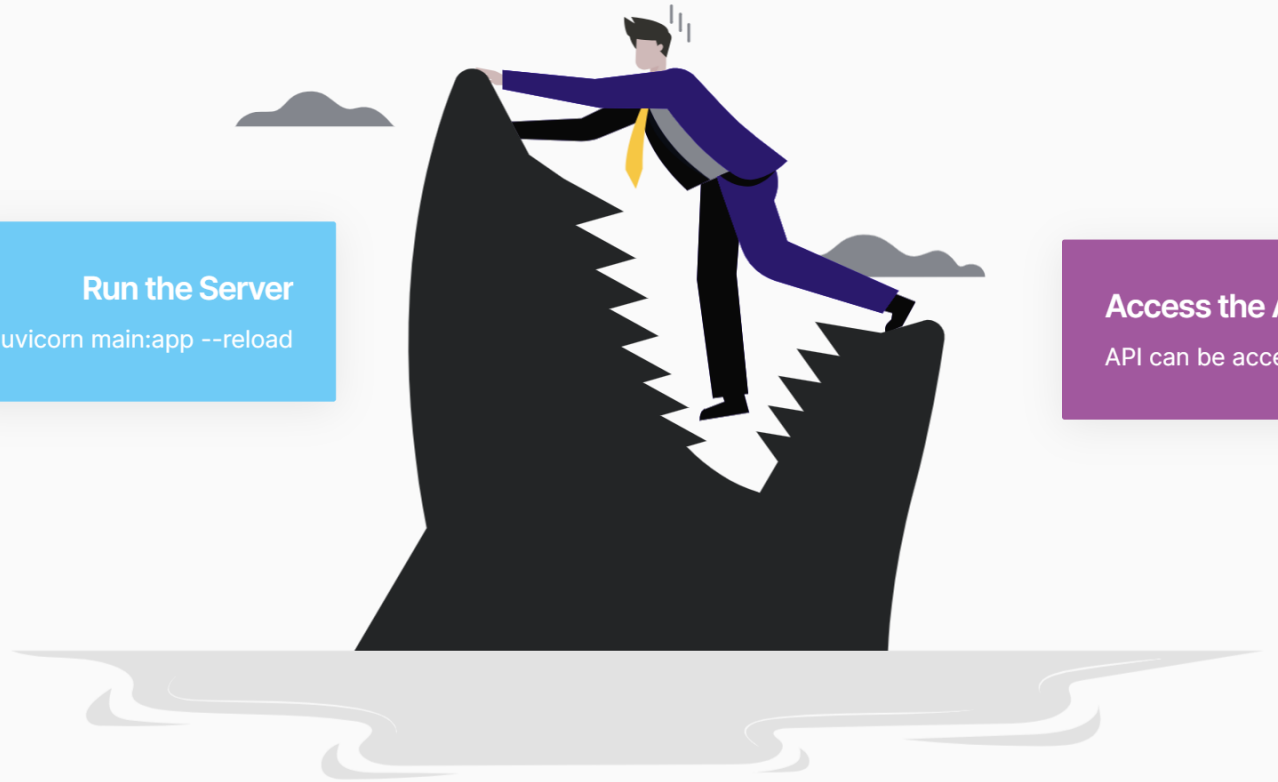
Step-by-Step Instructions

Install Dependencies

pip install -r requirements.txt

Run the Program

python main.py



Run the Server

uvicorn main:app --reload

Access the API

API can be accessed at http://127.0.0.1:8000/

Testing

Ensuring Code Reliability

Automated Tests

Implemented using pytest

Benefits

Advantages of Automated Data Extraction

Time Savings

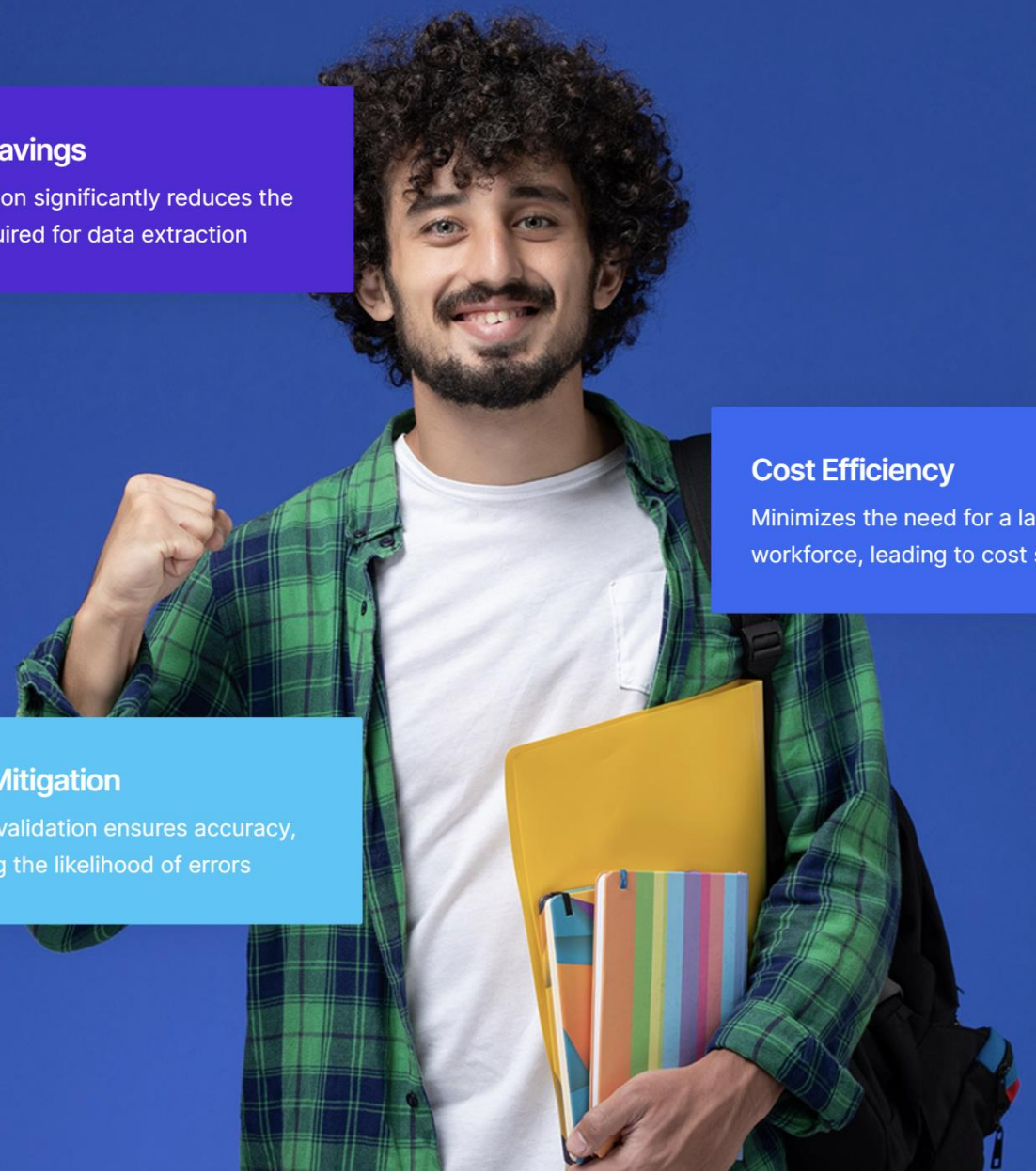
Automation significantly reduces the time required for data extraction

Cost Efficiency

Minimizes the need for a large manual workforce, leading to cost savings

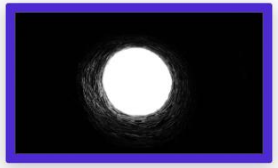
Error Mitigation

Human validation ensures accuracy, reducing the likelihood of errors



Conclusion

Streamlining Claims Processing

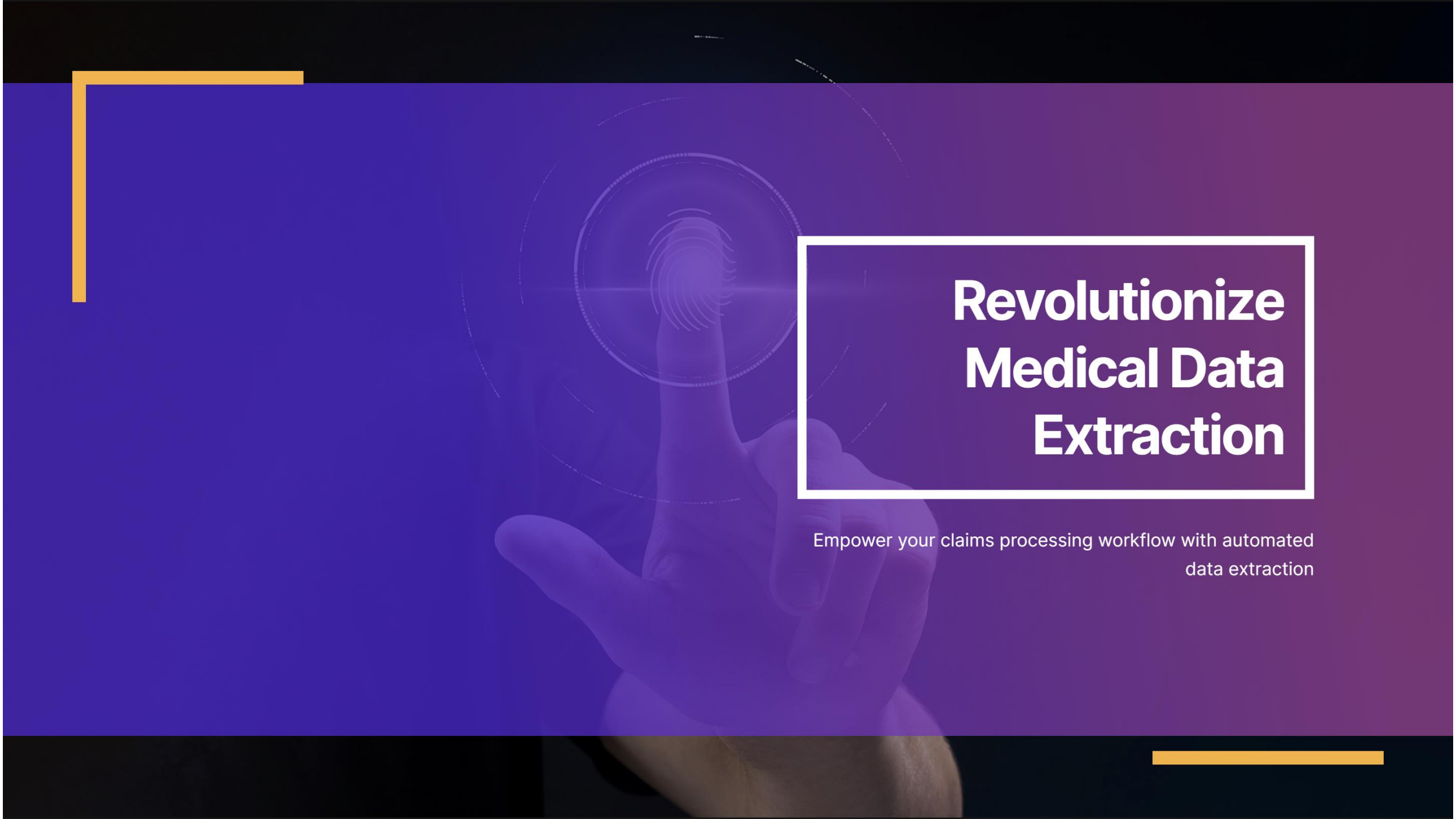


Objective

1. Streamline claims processing workflow

Benefits

1. Efficiency, Accuracy, and Cost-effectiveness



Revolutionize Medical Data Extraction

Empower your claims processing workflow with automated data extraction