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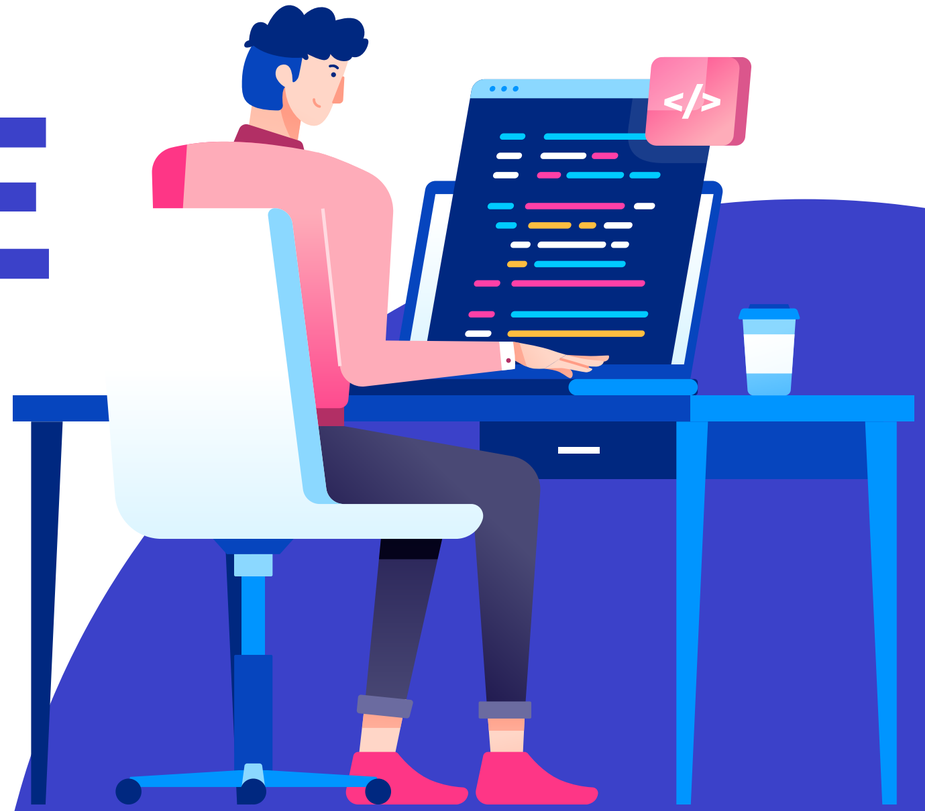
# SEE W/ ME

Ritesh, Mohak, Pratyaksh, Shyam



BitCamp Hackathon: April 13 - 2025

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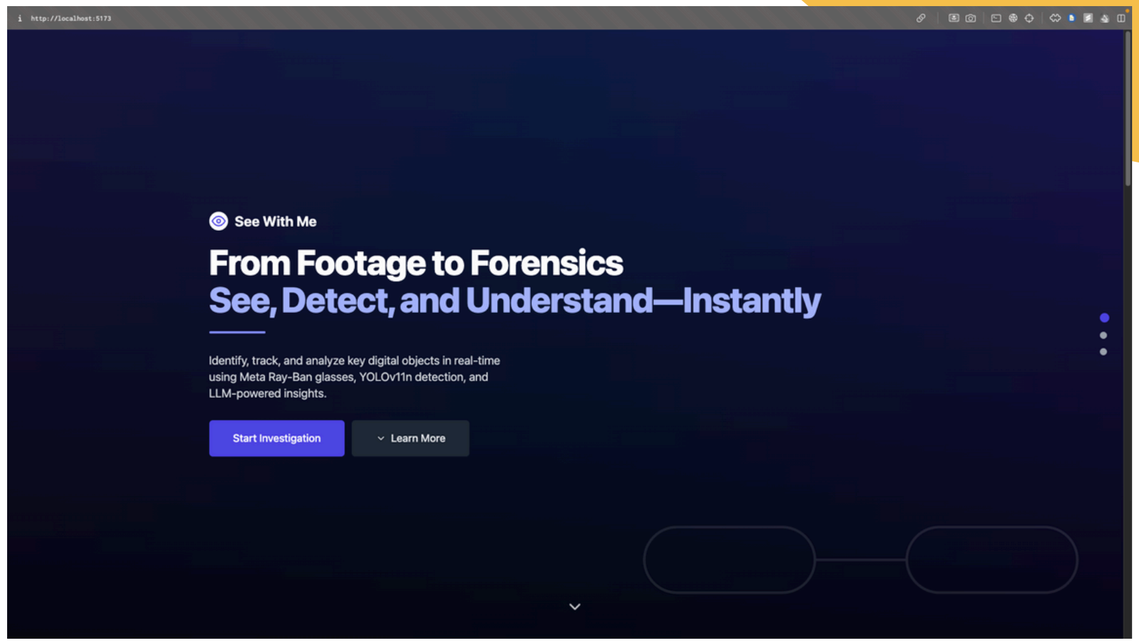
# The Digital Investigator’s Challenge

- “Over 80% of criminal investigations now involve the analysis of digital video footage.” — [Interpol Digital Forensics Briefing, 2023].
- Manually reviewing hours of footage is slow, error-prone and tedious
- What if AI could instantly spot key objects and suspicious actions, letting investigators jump straight to what matters?



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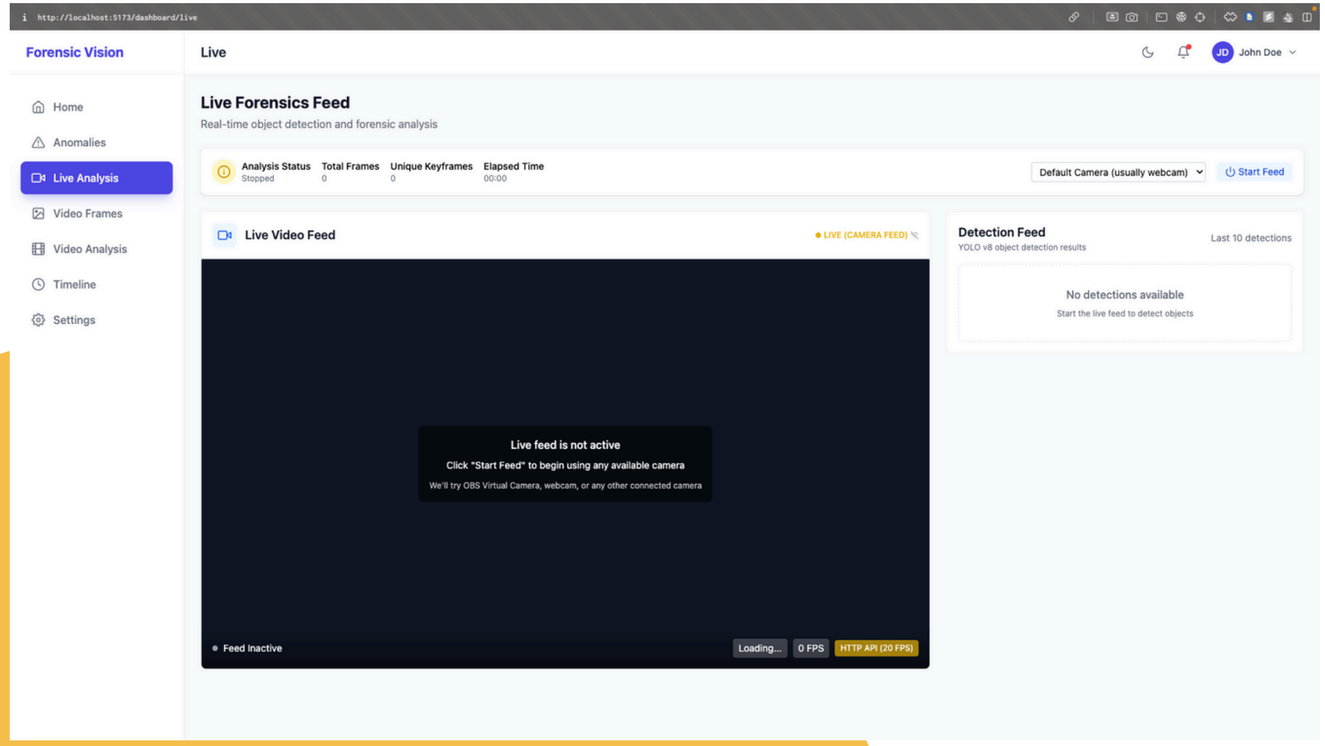
# Smart Triage for Visiual Evidence




- Automatically identify key visual elements (USBs, drives, screens, etc.)
- Generate concise forensic summaries using agentic systems
- Aid the forensics experts by cutting down search times on videos.

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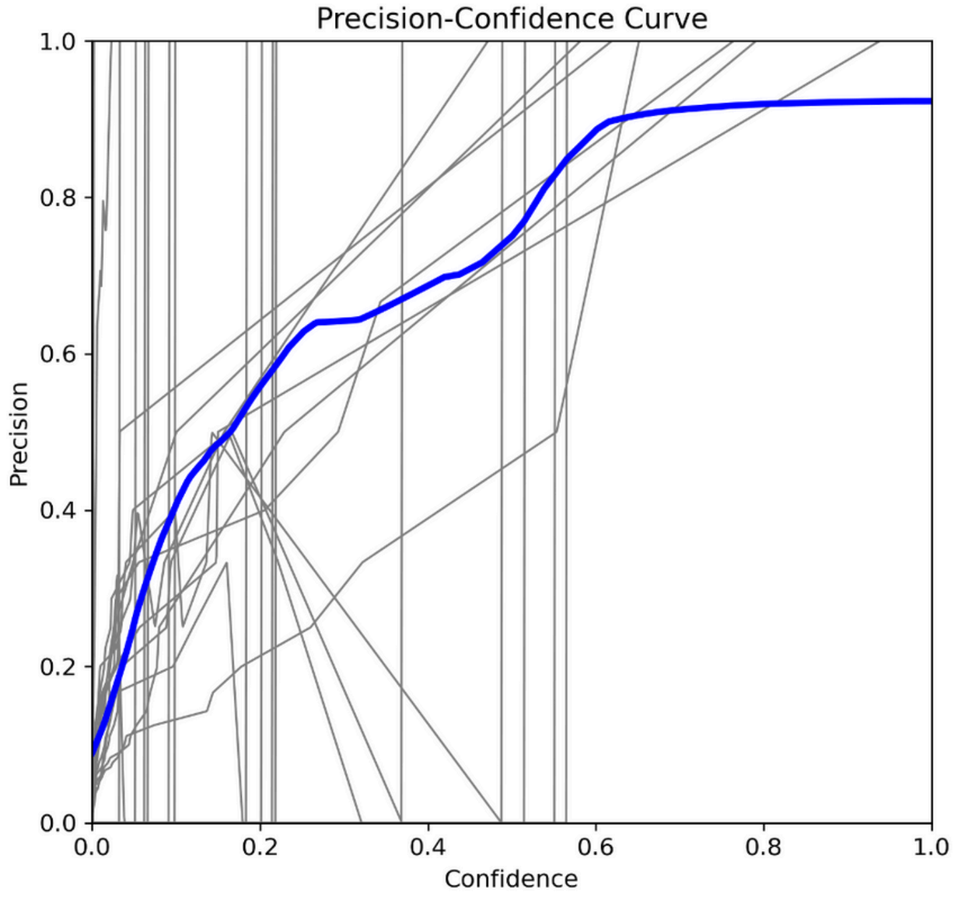
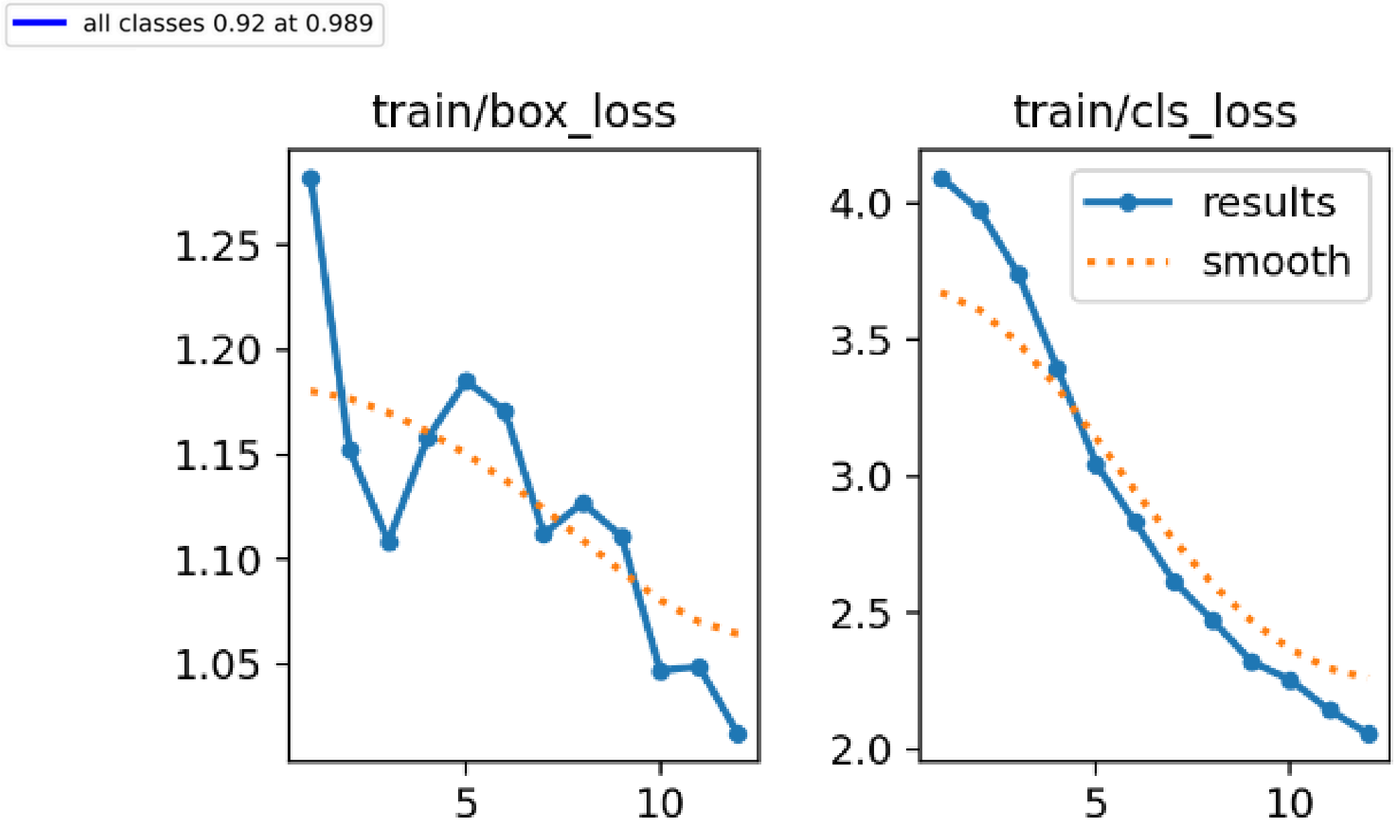
# How It All Works

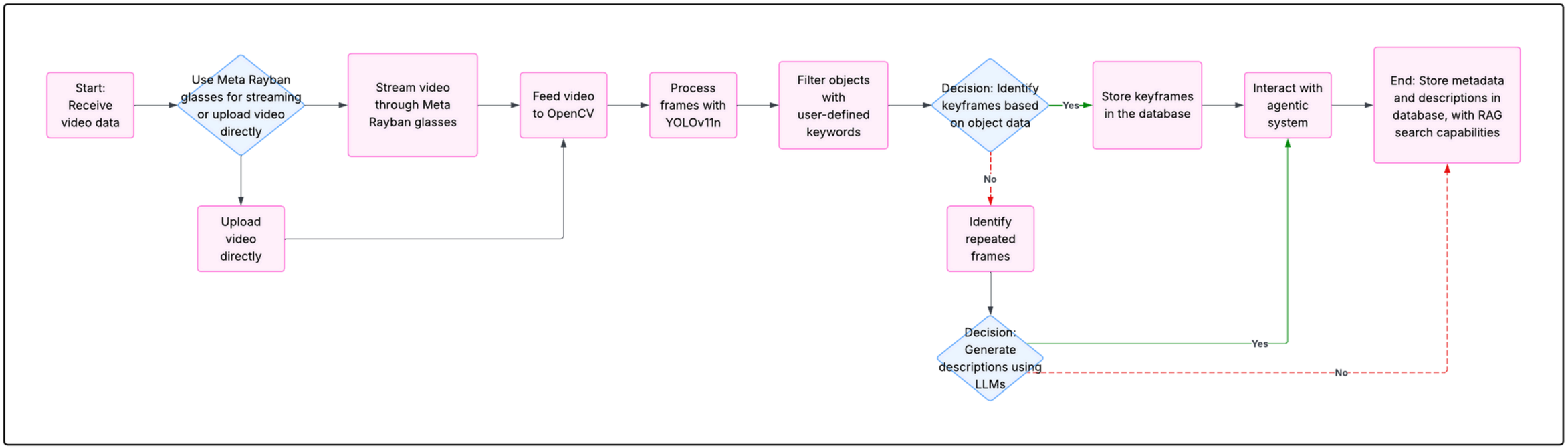
- **Live Capture** from Meta Ray-Ban smart glasses via Instagram Live
- **Frame Extraction** using OpenCV with the help of (for live videos)
- **Object Detection (YOLOv11n)** for forensic-relevant items: USBs, drives, screens, etc.
- **Agentic AI Insights** analyse descriptions and insights for detected scenes
- **Forensic Timeline** helps visualize events in a chronological timeline
- **Interactive Dashboard** displays modern React frontend with real-time updates

# MODEL DIAGRAMS



# FLOW CHART


Start: Receive video data
Use Meta Rayban glasses for streaming or upload video directly
Stream video through Meta Rayban glasses
Upload video directly
Feed video to OpenCV
Process frames with YOLOv11n
Filter objects with user-defined keywords
Decision: Identify keyframes based on object data
Yes
No
Store keyframes in the database
Identify repeated frames
Decision: Generate descriptions using LLMs
Yes
No
Interact with agentic system
End: Store metadata and descriptions in database, with RAG search capabilities

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# WHATS THE FUTURE?

## NEXT STEPS

**Natural language** search across all keyframes.
**Steganography** or anomaly flagging
Better and more efficient multi-object tracking across time
Integration with forensic tools like **Autopsy or FTK**
**Expert Notes Integration via audio transcription** (Whisper or similar)

## IMPACT

**Speeds up** video review in time-sensitive investigations
Helps forensic teams focus on **high-value evidence**
Enhances visibility into digital artifacts beyond manual review
Enables smarter, **AI-assisted case reconstruction**
**Reduces human error** in video-based investigations

## VISION

Seamless integration with forensic lab tools
**Scalable** to handle large-scale evidence sets from multiple sources
**Empower experts** with fast, explainable insights from visual data
Become the default toolkit for **smart forensic video triage**

# THANK YOU

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01 GITHUB: HTTPS://GITHUB.COM/RITESH3280/BITCAMP25

02 DEVPOST: HTTPS://DEVPOST.COM/SOFTWARE/SEE-WITH-ME?REF_CONTENT=USER-PORTFOLIO&REF_FEATURE=IN_PROGRESS

03 FRONTEND: REACT + VITE, TAILWIND CSS

04 BACKEND: PYTHON, FLASK, PYTORCH, HUGGINGFACE, OPENCV, AGENTIC AI

05 VECTOR STORES: PINECONE