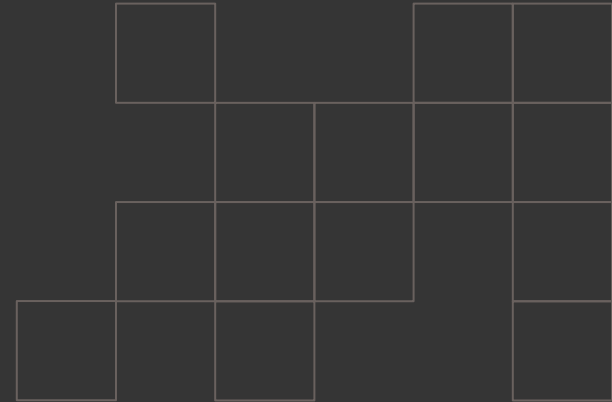


Master of Science in Artificial Intelligence

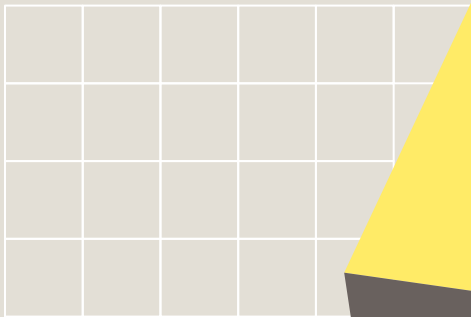
# Professional Industry Defense

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AI Mastery Capstone  
By: Frank Allen Motley



# Sector, Thesis, and What Could Be Built



## Sector:

Creative / Advertising / Studio  
Post-Production

## Thesis:

Accelerate post-production + variants  
without losing editorial intent,  
compliance, or auditability

## Product concept:

Studio AI Production Assistant

# Industry Context & Problem Definition

## Industry Context

1

Reality:

2

Pain points:

3

Why AI:

## Problem Definition

**Shrinking timelines, format proliferation (9:16, 1:1, 16:9),  
more stakeholders**

**Search/triage, review cycles, compliance risk,  
version chaos**

repeatable tasks + decision support + controlled  
generation

# System Overview

1.

Ingest assets + docs → **make searchable**

2.

**Selects + risk flagging**

3.

**Brand-grounded RAG** (notes/briefs/copy)

4.

Enhancement toolchain (denoise, stabilize, up-res, interpolate)

5.

Controlled generation (approved use only)

6.

**Provenance + audit logs + approvals**

# Integrated AI System Architecture

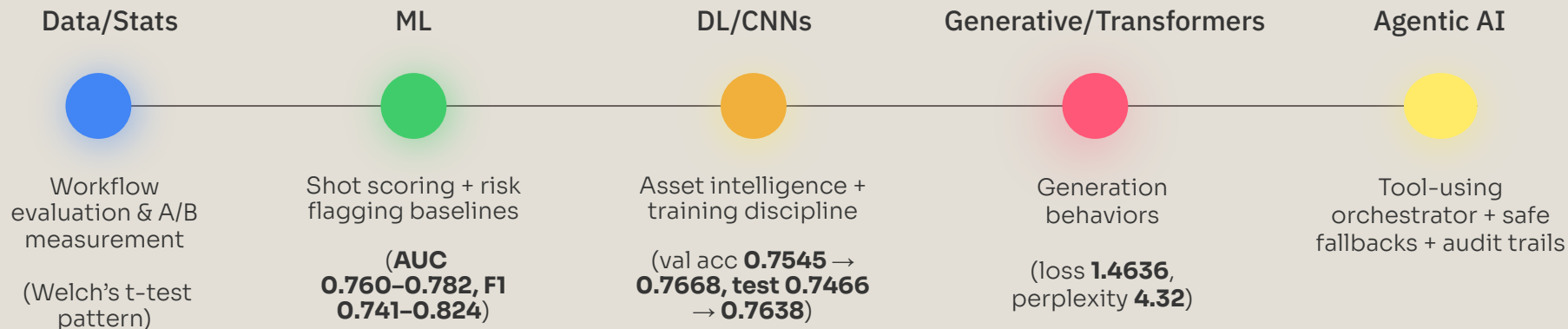
## Frame.io (Adobe)

cloud collaboration + review +  
approvals hub

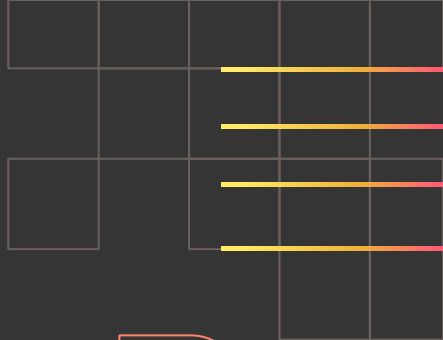
- Asset Intelligence → embeddings + metadata
- Decision Support → shot scoring + risk flags
- RAG Engine → grounded drafts
- Orchestrator → tool chaining + logs + rollback
- Human gates → Editor → Creative Dir → Brand/Legal



# Integration of Prior Capstone Projects



# Key Technical Decisions & Tradeoffs



1

## Latency vs Privacy

On-prem/private cloud  
vs public APIs

2

## Quality vs Throughput

Enhancement strength  
vs time/cost

3

## Grounding vs Creative

Brand constraint vs  
novelty

4

## Automation vs Accountability

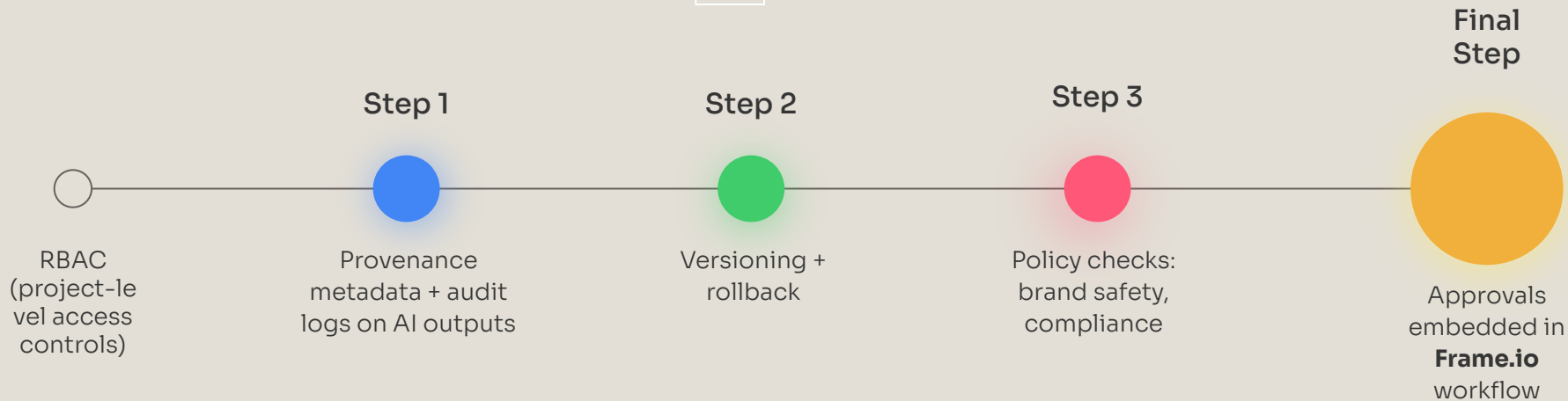
Intentional human  
gates

5

## Drift monitoring (style shifts + thresholds)

Style shifts +  
thresholds

# Responsible Deployment & Safeguards





# Incident Response Playbook

## Triggers:

Policy violation, quality failure,  
governance/provenance missing

## Actions:

Quarantine → freeze state → notify → root-cause → remediate + document

## Outputs:

Incident ticket + affected assets + audit bundle + corrective actions

# Evaluation, Limitations, Professional Relevance, Next Steps

## Limitations

- Conceptual design (no production deployment)
- Metrics proposed, not yet validated

## Next steps

- Pilot with A/B workflow measurement
- Prompt library + failure-case catalog
- Drift monitoring dashboard

1

### Workflow:

Time-to-rough-cut, time-to-approval, iterations/day

2

### Quality:

Temporal consistency, artifact rate, enhancement metrics

3

### Compliance:

Violation catch rate, false positive burden

4

### Audit:

Provenance completeness



Thank you