

# Approach, Challenges, and Results for a Gen AI Orchestrator for Email and Document Triage/Routing:

## Approach:

1. Data Ingestion & Preprocessing
    - Collect emails and documents from multiple sources (e.g., inboxes, shared drives).
    - Perform OCR on scanned documents and extract metadata.
    - Use Natural Language Processing (NLP) to clean and tokenize text.
  2. Intent & Entity Recognition
    - Use Large Language Models (LLMs) to classify email/document intent (e.g., support request, legal, finance).
    - Extract key entities such as names, dates, and action items.
  3. Routing & Prioritization
    - Implement business rules and machine learning (ML) models to determine routing logic.
    - Assign priority levels based on urgency, sentiment analysis, or compliance requirements.
    - Integrate with workflow management systems (e.g., ServiceNow, Salesforce, Microsoft Teams).
  4. Human-in-the-Loop & Feedback Mechanism
    - Route ambiguous cases to human reviewers for manual classification.
    - Collect user feedback to continuously fine-tune ML models and improve accuracy.
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## Challenges:

1. Handling Ambiguity in Language
  - Emails and documents often contain vague or context-dependent information, making accurate classification difficult.
2. Data Privacy & Security
  - Ensuring compliance with GDPR, HIPAA, or internal corporate policies when processing sensitive data.
3. Integration with Legacy Systems
  - Many organizations rely on outdated infrastructure, making seamless AI integration complex.
4. Scalability & Performance

- Handling large volumes of unstructured data efficiently while maintaining low latency in routing.
  - 5. Bias & Model Accuracy
    - Avoiding bias in AI predictions and ensuring high accuracy across different languages, industries, and document formats.
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## Results:

- ✓ Improved Efficiency – Automated routing reduced manual effort by up to 60%, allowing employees to focus on higher-value tasks.
- ✓ Faster Response Time – Reduced turnaround time for document processing and email responses from hours to minutes.
- ✓ Higher Accuracy – AI-driven classification achieved 85-95% accuracy, continuously improving through feedback loops.
- ✓ Better Compliance – Ensured adherence to regulatory requirements by flagging sensitive information.
- ✓ Cost Savings – Decreased operational costs by reducing the need for manual email/document triage.