Introduction to Document AI by Google

Yogesh Haribhau Kulkarni

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Outline

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About Me

Yogesh Haribhau Kulkarni

Bio:

- 20+ years in CAD/Engineering software development
- Got Bachelors, Masters and Doctoral degrees in Mechanical Engineering (specialization: Geometric Modeling Algorithms).
- Currently doing Coaching in fields such as Data Science, Artificial Intelligence Machine-Deep Learning (ML/DL) and Natural Language Processing (NLP).
- Feel free to follow me at:
  - Github (github.com/yogeshhk)
  - LinkedIn (www.linkedin.com/in/yogeshkulkarni/)
  - Medium (yogeshharibhaukulkarni.medium.com)
  - Send email to yogeshkulkarni at yahoo dot com

Office Hours:
Saturdays, 2 to 5pm (IST); Free-Open to all; email for appointment.

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Document AI

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Introduction

- ▶ Overview of Document AI by Google
- ▶ Importance of intelligent document processing
- ▶ Introduction to key features of Document AI

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Concepts

- ▶ Understanding intelligent document processing (Brain with a document)
- ▶ Optical Character Recognition (OCR) technology (Scanning document with OCR icon)
- ▶ Natural Language Processing (NLP) for document understanding (Document with speech bubbles)
- ▶ Extracting structured data from unstructured documents (Document with structured data flowing out)
- ▶ Key concepts of machine learning applied to document processing (Document with ML model icon)

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Framework

- ▶ Overview of the Document AI platform (Cloud with document icon)
- ▶ Integration with Google Cloud services (Interconnected Google Cloud services)
- ▶ Document AI API and SDKs (Code icon with API abbreviation)
- ▶ Training custom models for specific document types (Document with custom training icon)
- ▶ Scalability and reliability of the framework (Scaling bars with checkmark)

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Workflows

- ▶ Automating document processing workflows (Document passing through workflow steps)
- ▶ Document ingestion and preprocessing (Document entering a processing pipeline)
- ▶ Document classification and data extraction (Documents being classified and data extracted)
- ▶ Validation and verification of extracted information (Validation checkmark on extracted data)
- ▶ Integration with other systems and processes (Documents integrating with other systems)

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Architecture

- ▶ High-level architecture of Document AI (Architecture diagram of Document AI)
- ▶ Document processing pipeline (Pipeline flowchart for document processing)
- ▶ Distributed computing and parallel processing (Multiple nodes processing documents)
- ▶ Scalability and fault tolerance considerations (Scaling servers with fault tolerance)
- ▶ Data security and privacy aspects (Lock icon with data protection)

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Use Cases

- ▶ Overview of real-world applications of Document AI (Multiple icons representing different industries)
- ▶ Invoice and receipt processing (Invoice icon with data extraction)
- ▶ Contract and legal document analysis (Gavel icon with document analysis)
- ▶ Forms processing and data extraction (Form icon with data extraction)
- ▶ Regulatory compliance and data governance (Compliance icon with document review)

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Applications

- ▶ How Document AI can be used across industries (Multiple icons representing different industries)
- ▶ Financial services: Loan processing, KYC, etc. (Bank icon with loan document)
- ▶ Healthcare: Patient records, claims processing, etc. (Medical icon with patient record)
- ▶ Legal: Contract analysis, eDiscovery, etc. (Gavel icon with legal document)
- ▶ Retail: Inventory management, order processing, etc. (Store icon with inventory)

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Conclusion

- ▶ Recap of the key points covered (Bulleted list summarizing key points)
- ▶ Advantages of Document AI for intelligent document processing (Document AI logo with advantages)
- ▶ Encouragement to explore Document AI's capabilities (Magnifying glass searching in a document)
- ▶ Contact information for further inquiries or assistance (Contact information icon)

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References

- ▶ List of resources and references for further reading (Books icon with reference list)
- ▶ Google Cloud documentation on Document AI (Google Cloud logo with documentation link)
- ▶ Case studies and success stories (Case study icon with links to case studies)
- ▶ Relevant whitepapers and research papers (Paper icon with links to papers)

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Thanks . . .

- ► Search **"Yogesh Haribhau Kulkarni"** on Google and follow me on LinkedIn and Medium
- ► Office Hours: Saturdays, 2 to 5pm (IST); Free-Open to all; email for appointment.
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