Revolutionizing Insurance Innovation through AI and Unstructured Data

By Khyati Sharma

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Insurance is rich in data

- Claims notes
- Police reports
- Medical records
- Emails
- PDFs
- Voice transcripts
- Images
- Adjuster narratives

Data is foundational - intelligence is differentiating

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Challenges of insurance Data

What Makes Unstructured Data Difficult

Does not arrive in predefined fields

Requires contextual interpretation

Often fragmented across multiple systems

How It Was Traditionally Handled

Reading reports manually

Validating information accuracy

Cross-referencing inconsistencies

Searching across disconnected platforms

The Reality of Manual Processing

Highly skilled professionals spent time finding information

Less time spent acting on insights

Process worked, but lacked scalability

Why the Problem Intensified

Data volumes increased rapidly

Complexity grew faster than capacity

Bottleneck shifted from **data availability → data usability**

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Why Now? The Inflection Point

- **First**, explosion of unstructured data.

- **Second**, maturity of AI technologies.

- **Third**, pressure for speed, precision, and experience.

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AI-Driven Understanding

- **From Storage → Interpretation**
- **From Retrieval → Insight**
- **From Manual Effort → Scalable Intelligence**

A Fundamental Change

- AI adds the ability to **understand**, not just store
- Documents become **analyzable assets**, not static records
- Data moves from passive to intelligent

What AI Can Now Do

- Read and interpret natural language
- Recognize entities (names, dates, amounts, locations)
- Understand relationships and context
- Classify document types and content
- Detect anomalies and inconsistencies
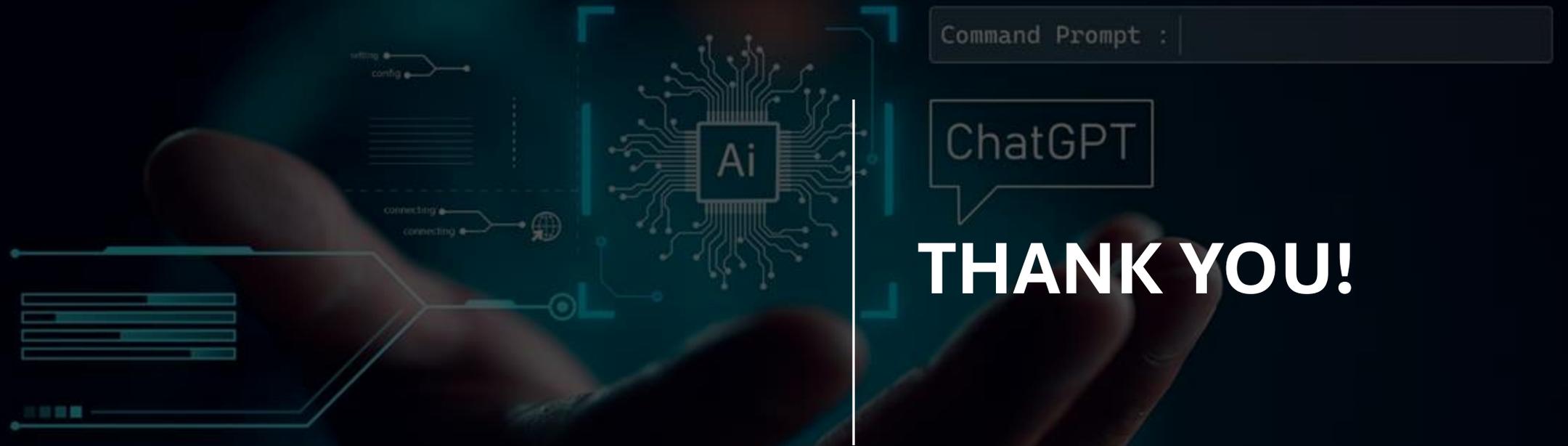- Summarize narratives

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Insurance Innovation

- **Intelligent Claims Triage Engine**
  Prioritizes claims by analyzing FNOL narratives & attachments

- **AI-Driven Liability Assessment**
  Interprets police reports to identify contributing factors

- **Medical Document Intelligence**
  Detects treatment patterns & billing anomalies

- **Fraud Detection Engine**
  Uncovers inconsistencies across notes & communications

- **Underwriting Intelligence Assistant**
  Extracts risk indicators from inspections & reports

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- Accountability – Who owns model outcomes?

- Explainability – Can decisions be justified?

- Bias & Fairness – Are results equitable?

- Model Monitoring – Detect drift & degradation

- Human Oversight – Critical decision checkpoints

GOVERNANCE

Innovation + Intelligence + Governance = Trusted AI Transformation

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Command Prompt :

ChatGPT

THANK YOU!

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