Intelligent Financial Document Analysis for Regulatory Compliancy


Keywords:
- Artificial Intelligence (AI)
- Natural Language Processing (NLP)
- Named Entity Recognition (NER)
- Relation Extraction
- Event Detection
- Text Summarization

Problems addressed
- The challenge of handling various kinds of complex formatted documents in the financial sector
- The need to understand, analyse and extract specific data information for the purpose of regulatory compliance checking, report generation, and disclosure requirement, etc.
- The issue of existing process which is slow, error-prone and labor-intensive

ASTRI’s Financial Document Analysis (FDA) system addresses these pain points, providing an intelligent information cognition system to automatically analyse and extract key information from the financial documents, and conduct summary generation and compliance checking.

Innovations
ASTRI’s FDA system provides an end-to-end solution based on deep learning to enhance regulatory technology, reduce “Non-compliance costs” and “Manual checking processes”, and improve the operational efficiency with artificial intelligence (AI).

The innovation outlines:
- A deep natural language processing engine to accurately extract entities, relationships, and event roles
- Hybrid (table and text) data mining models to conduct structure process of the richly formatted documents
- A document level event extraction to detect and extract the events scattered across the documents
- A deep learning based end-to-end solution to enhance Regulatory Technology

Key impact
- Reduce Non-compliance costs
- Reduce manpower cost of manual checking process
- Improve the operational efficiency
- Automate and streamline the whole regulatory compliance checking process

Innovation snapshot

Project completed
- 2021

Applications
- Document Summary
- Report Generation
- Regulatory Compliance Checking
- Enterprise Knowledge Graph
- Information Consistency Checking

Patent(s)
- N/A

Commercialisation opportunities
- IP licensing
- Technology co-development

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