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## (54) Title of the invention : DYNAMIC DIGITAL INFORMATION DISCOVERY SYSTEM AND METHOD USING NATURAL LANGUAGE PROCESSING AND MACHINE LEARNING TECHNIQUES

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(57) Abstract :

The present subject matter introduces a dynamic digital information discovery system (100) that consists of three core components: a natural language processing unit (102), a machine learning unit (104), and a search engine (106). The natural language processing unit (102) is designed to analyze both user queries and digital content, enabling it to discern and establish semantic relationships between various words and phrases. Concurrently, the machine learning unit (104) continually refines search results based on user interactions and feedback, ensuring that the outcomes become progressively tailored to user preferences. The search engine (106) leverages the insights generated by the natural language processing unit (102) and the machine learning unit (104) to offer dynamically updated search results that reflect evolving user needs and content availability. This system significantly improves the efficiency of digital information discovery by delivering search results that continuously adapt to user preferences and provide contextually relevant information.

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