

**UNITED STATES
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Artificial intelligence (AI) for patents

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Auto-classification for patents

- Prototype leverages machine learning to automatically classify patent documents in CPC
- The USPTO is currently assessing results and maturing prototype functionality with input from classification experts
- Leverage business processes to collect feedback from examiners and classification experts for improving AI models

Opportunities for value

- **Quality assurance**
 - Correct classification: auto-classification can provide data-driven decision making for CPC symbol assignment
 - Complete classification: auto-classification system considers all text of a patent document with all CPC symbols
 - Consistent classification: auto-classification system diminishes subjectivity in classification assignment from multiple classifiers
- **Possible operational efficiency gains**
 - Potential reductions in internal costs

Patent AI prototype for search

- Integrated with PE2E Search tool as a “one-stop-shop” for examiners
 - Cloud-based solution
 - AI can identify documents
 - AI suggests search areas to consider
 - Automatically captures feedback to improve AI models
- Released Beta test in March 2020 to ~500 users
 - Results will help inform path forward

Opportunities for value

- Potential search effectiveness of contribution of AI:
 - Increasing retrieval of relevant prior art while reducing retrieval of irrelevant prior art
 - Assisting examiners in reviewing prior art
 - Suggesting other relevant search areas
- Broader search across all technology areas
- AI learning will improve search models over time



Thank you!

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