UNITED STATES
PATENT AND TRADEMARK OFFICE



Artificial intelligence (AI)/IT updates

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August 9, 2022

Patent Public Advisory Committee public meeting



Results and retrospective

Public Al research challenge: U.S. Patent Phrase-to-Phrase Matching

Why a public AI challenge?

- USPTO: America's Innovation Agency
 - Deploying AI innovation in service of patent offices & stakeholders.
- Traditional IT product development:
 Bringing ideas to impact.
- But how to source & validate ideas in the rapidly-evolving AI ecosystem?



Why a public AI challenge?

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Answer: Leverage the combined expertise and enthusiasm of the public research community.

Goal and approach

Goal

Enlist the AI research & data science communities to tackle difficult AI & machine learning challenges for the benefit of the USPTO and the IP community.

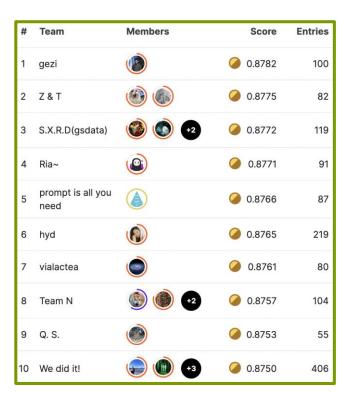
Approach

Run a worldwide AI competition based on annotated USPTO Open Data and quantitative benchmarking.



Implementation and results

- "U.S. Phrase-to-Phrase Matching Challenge"
 - Worldwide Kaggle competition
 - March–June 2022
 - Research objective: extract semantic meaning from technical language in patent documents
- Fierce competition:
 - 2,325 competitors representing 85 countries
 - 42,905 code submissions
 - 87.8% top performance
- Alongside remarkable collaboration:
 - 1,413 discussion posts
 - 1,122 publicly shared code notebooks





Post-competition outreach

- June 29: Al & ET Partnership Inaugural Meeting
 - Announcement of results by Director Vidal
- July 15: PatentSemTech at SIGIR 2022 Madrid
 - USPTO delegation: Jamie Holcombe and Jerry Ma
 - Google/Kaggle colleagues
 - Patent AI & NLP community
- July 27: Global winner calls
 - Top three contestants (prize money awardees)
 - USPTO: Chief Information Officer & staff



Takeaways

- Tremendous untapped potential within the global AI community
- Talent comes from everywhere:
 - Universities
 - Large tech companies & startups alike
 - Independent scientists & engineers
- How to unlock that talent and bring it to bear on IP?
 - High-quality, intuitive datasets
 - Meaningful benchmarks
 - Environment that fosters both competition and collaboration
 - Intrinsic motivation



Field report from the Chief Information Officer

Recent USPTO/UKIPO discussions: partnerships and best practices

Al product showcase

"More Like This" demonstration

Questions and comments

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