

Auto-Tagging of Patent Applications to Facilitate Discovery of Relevant Prior Art

The Intellectual Property Office of Singapore (IPOS) is the national agency responsible for the administration of IP rights in Singapore.

IPOS helps businesses use intellectual property (IP) and intangible assets (IA) to grow and is committed to building Singapore into an international hub for IP/IA to drive Singapore's future growth.

IPOS is a statutory board under the Ministry of Law.



"The AISG team was a tremendous help in guiding the team, enabling us to work with the PIs right from the start. We're glad to support 100E and have it boost IPOS' ongoing digitalisation journey. By automating manual portions of the examination process, we can provide quality patent examination reports more efficiently, help innovators use IP for growth, and continue to strengthen Singapore's position as an innovation and IP hub."

Sharmaine Wu

Director, Registries of Patents, Designs and Plant Varieties

BACKGROUND

- Upon receiving a patent application, the Patent Examiner needs to determine the relevant patent classification codes to be tagged to the application and conduct prior art search using both codes and relevant keywords in public e.g., Google Patents, Espacenet as well as subscribed commercial databases
- Effectiveness of the search is subject to the accuracy of the codes/keywords and Examiner expends a significant amount of time to manually come up with the codes, keywords and subsequently the set of relevant prior art
- The abovementioned are currently carried out manually by the Examiner

OUTCOMES



Estimated to save **25%** of current man hours per search-examination work

BUSINESS CHALLENGE

How can IPOS create a minimum viable model to (i) auto-tag patent applications with the relevant classification codes and (ii) automated generating a set of relevant prior arts.

AI SOLUTION DEPLOYED

An AI solution was developed using natural language processing to:

1. Analyse incoming patent applications
2. Assign classification codes to the application
3. Perform a search from an internal database
4. Determine the prior arts relevant to the application
5. Rank the prior art in an order of relevance
6. Tag the prior arts to the application