



# Summarization Powered Search: Azure Cognitive Search + Agolo Contextual Summarization

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## PROBLEM

Search and traditional approaches fall short when trying to understand complex information.

## SOLUTION

**Summarization powered search** accelerates the analysis of critical information at scale.

## OUR INVESTORS



Google



POINT72  
VENTURES

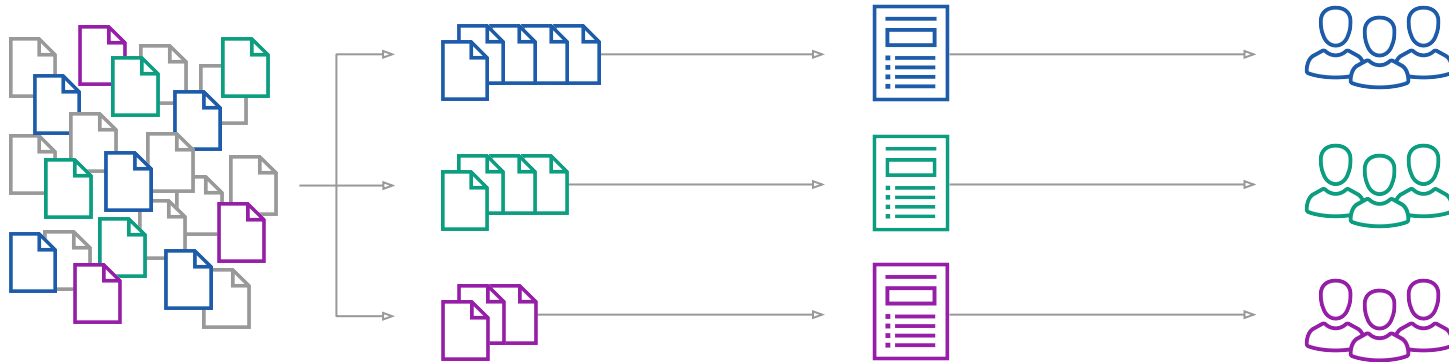


COLUMBIA  
UNIVERSITY



## AGOLO SUMMARIZATION LIFECYCLE

Agolo unlocks the value of your content, automatically reading, organizing and creating customized summaries at-scale.



### INPUTS

Aggregates and discovers stories or documents you wouldn't have known to search for. Agolo covers 700,000+ documents daily, including external and enterprise data sources.

### SUMMARIZATION

Automatically creates customized summaries based upon search focus. Agolo distills the most relevant insights. Agolo creates around 2,000,000 summaries daily.

### DISTRIBUTION

Automatically distributes 2,000,000 personalized summaries to individual recipients everyday.

# USE CASE: PRIVATE DOCUMENT SUMMARIZATION



## CHALLENGE

- The White House Covid-19 dataset of 60,000+ research documents of constantly new and updated information.
- A broad audience of health care professionals, scientists and others required a user experience to support both pros and consumers.

## AGOLO SOLUTION

- We partnered with Microsoft Azure Cognitive Services team:
  1. Integration of Agolo with Azure Cognitive Search.
  2. We combined existing ontologies (e.g. Allen Institute) with Agolo Knowledge Graph to identify semantically similar terms.
  3. Agolo surfaces and dynamically generates a summary utilizing the context of the user's search terms.

## BENEFIT / VALUE

- Instant insight into how each document answers the user's question, reducing search time and improving access to critical information.

Announcement at Microsoft Build showcasing our work with Azure Cognitive Search for the White House:  
<https://channel9.msdn.com/Shows/Al-Show/Using-AI-to-mine-unstructured-research-papers-to-fight-COVID-19>

### 1. OUTPUT

- Bullet Summary
- Speakable Summary

### 2. RELEVANCY

- Query-based
- Ontology-driven
- Multi-Document
- Knowledge Graph Creation

### 3. READABILITY

- Coherence
- Coreference resolution
- Speech Tagging (SSML)

Covid-19 Search - Ibuprofen

**COVID-19 pandemic and therapy with ibuprofen or renin-angiotensin system blockers: no need for interruptions or changes in ongoing chronic treatments**

Original Source: [Link to Full Article](#)

#### Authors

- Oliver Zolk
- Susanne Hafner
- Christoph Q Schmidt

#### Contextual Summary (generated by Agolo)

- Scientists hypothesized that drugs such as ibuprofen or renin-angiotensin system (RAS) blockers exacerbate the novel coronavirus disease COVID-19 by upregulating the angiotensin-converting enzyme (ACE2), which serves as an entry receptor for the coronavirus SARS-CoV-2.
- These reports mention angiotensin-converting enzyme (ACE) inhibitors and angiotensin receptor blockers (ARBs), which are commonly used drugs to treat patients with hypertension, heart failure, or kidney complications in diabetes mellitus, as well as ibuprofen, which is an over-the-counter drug prescribed or used to treat arthritis and rheumatic diseases among other indications.
- A higher number of comorbidities, which increase with age, are correlated with poorer clinical outcomes (Guan et al. 2020; Yang et al. 2020; Zhang et al. 2020) .

# Agolo Summarization-Powered Search Architecture

