AI IN CONGRESS
CONVERSATION
APRIL 21, 2023
HOSTED BY:

POPVOX FOUNDATION
lincoln network
DEMAND PROGRESS
OUTLINE

- Technical advances and resources within Congress
- AI level setting: timeline, major players, use cases
- Participant roundtable introductions and perspectives
- Continuing the conversation
THE PACING PROBLEM

EXTERNAL
Failure to keep pace with emerging innovations that are changing industries and society

INTER-BRANCH
Congress lags the executive branch, compromising its ability to act as a co-equal branch of government

INTERNAL*
Failure to employ modern practices and technology for its own operations.
FIRST BRANCH & TECHNOLOGY

- House Select Committee on Modernization (2019-2022) →
  Modernization Subcommittee in Committee on House Administration
- Bicameral Congressional Data Task Force
- Communicating with Congress Project
- House & Senate adaptation to remote work during pandemic (CAO)
- House launch of eHopper, Comparative Print Project (Clerk)
- Senate development of Quill e-signature platform & sharing w/ House (SAA)
- Ongoing upgrades to Congress.gov (LoC)
- Growth of GAO Science, Technology Assessment, and Analytics (STAA)
  & GAO Innovation Lab
- Launch & staff up of House Digital Services
- House & Senate AI Caucuses
Artificial Intelligence (AI) and Machine Learning. Several local, state, and foreign governments have recently started exploring ways to incorporate advanced computer software and analysis into the legislative process including for predictive problem-solving purposes. The Committee heard testimony explaining how these technologies can help government predict and prevent undesirable activities, test policies and options in real-life scenarios before adopting them, and find the best solutions by providing a set of alternatives to accelerate improved decision-making.
# Artificial Intelligence Timeline + Major Players

## 2021 Timeline (more than 24 large models in less than 12 months)

<table>
<thead>
<tr>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
</tr>
</thead>
<tbody>
<tr>
<td>DALL-E/CLIP</td>
<td>ALIGN</td>
<td>SEER</td>
<td>Meta</td>
<td>HyperCLOVA</td>
<td>GPT-J</td>
</tr>
<tr>
<td>12B</td>
<td>800M</td>
<td>1.3B</td>
<td>1.3B</td>
<td>204B</td>
<td>6B</td>
</tr>
<tr>
<td>Wudao 1.0</td>
<td>ruGPT-3</td>
<td></td>
<td>PanGu Alpha</td>
<td>NAVER</td>
<td></td>
</tr>
<tr>
<td>2.6B</td>
<td></td>
<td></td>
<td>200B</td>
<td>204B</td>
<td></td>
</tr>
<tr>
<td>Switch</td>
<td>Alibaba</td>
<td>CogView</td>
<td>Google</td>
<td>MUM</td>
<td>LaMDA</td>
</tr>
<tr>
<td>1.6T</td>
<td></td>
<td>4B</td>
<td>1xxB</td>
<td>137B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>BlenderBot 2.0</td>
<td>A21 labs</td>
<td>Jurassic-1</td>
<td>PLATO-XL</td>
<td>MT-NLG</td>
<td>Gopher</td>
</tr>
<tr>
<td>9.4B</td>
<td></td>
<td>178B</td>
<td>11B</td>
<td>530B</td>
<td>280B</td>
</tr>
<tr>
<td>Ai2 labs</td>
<td>Codex (GPT-3)</td>
<td>Bai</td>
<td>Inspur</td>
<td>Metis</td>
<td>DeepMind</td>
</tr>
<tr>
<td>12B</td>
<td>11B</td>
<td>11B</td>
<td>Yuan 1.0</td>
<td>245B</td>
<td>Glide</td>
</tr>
<tr>
<td></td>
<td>Coher</td>
<td></td>
<td>cedille (GPT-J)</td>
<td>6B</td>
<td>3.5B</td>
</tr>
<tr>
<td></td>
<td>coh</td>
<td></td>
<td>KoGPT (GPT-3)</td>
<td>6B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>kakao</td>
<td>Meta</td>
<td>Faireseq</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.1T</td>
<td></td>
</tr>
</tbody>
</table>

Selected highlights only. Alan D. Thompson, November 2021. [https://filterarchitecture.ai/](https://filterarchitecture.ai/)
ARTIFICIAL INTELLIGENCE

TIMELINE + MAJOR PLAYERS

Hugging Face BLOOM
July: Machine learning developer Hugging Face launches Bigscience Large Open-science Open-access Multilingual (BLOOM) Language Model trained on open-source databases.

Google PaLM
April: Google introduce Pathways Language Model (PaLM).

Google DeepMind
October: Google DeepMind Sparrow dialogue agent introduced.

OpenAI ChatGPT
November 30: OpenAI debuts generative AI chatbot ChatGPT to explosive interest.

Microsoft Invests in OpenAI
January: Microsoft invests a rumored $10 billion more into OpenAI.

Google Wordcraft
November: Google Wordcraft text generating tool launches.

Baidu ERNIE Bot
February: Baidu previews Ernie Bot.

Google BARD
February: Google announces BARD, a ChatGPT rival.

Bing + OpenAI
Microsoft debuts the New Bing powered by OpenAI and its own Prometheus Model.
CONGRESS VS. THE EXPONENTIAL ADVANCE OF AI

Large language models or “LLMs“ have the potential to significantly improve the productivity and efficiency of lawmakers and staff.

Failure to adopt new tools and processes risks Congress falling further behind the pace of change in society and struggling to meet constituent expectations.

The key to avoiding an acceleration of the internal pacing problem is for Congress to be proactive AND CAREFUL in incorporating LLMs and other advanced technologies into its operations.
AI wrote a bill to regulate AI. Now Rep. Ted Lieu wants Congress to pass it.

REPRESENTATIVE JAY R. AUCHINCLOSS USES CHATGPT ARTIFICIAL INTELLIGENCE TO WRITE HOUSE SPEECH

How AI could write our laws
ChatGPT and other AIs could supercharge the influence of lobbyists — but only if we let them
By Nathan E. Sanders & Bruce Schneier
March 14, 2023

Artificial Intelligence (AI)
Exploring AI tools like ChatGPT

Artificial intelligence (AI) tools like ChatGPT and the new Bing search engine are the future — and the House Digital Service team is making it easier for offices to understand and explore AI at the House.

What AI Means for the House
AI tools can be used for a variety of office administrative and operational purposes, including:
- Generating constituent response drafts and press documents;
- Summarizing large amounts of text or speeches;
- Creating policy papers or even bills;
- Creating new logos or graphical elements for branded office resources;
- And more.

How Your Office Can Leverage AI
Our new working group is open to any office interested in using AI tools like ChatGPT and other related cloud services.

Join the AI Working Group
INTERNATIONAL EXPLORATION

Techno-Politics Series: 4

Smart Parliaments
Data-Driven Democracy

Figure 1: Use of AI in parliaments (N=97)

Legal Drafting in the Era of Artificial Intelligence and Digitisation

Beyond Contemporary Parliamentary Practice: Unfolding the Institutional Potential of Artificial Intelligence [The Parliamentarian 2023 | Volume 104 | Issue 1]

March 2023

Authors:

Monica Palmirani, University of Bologna
Fabio Viti, University of Bologna
Willy Van Puyemboeck, European Commission
Fernando Nubilo Durango, European Commission

Fotios Fitsilis
Hellenic Parliament

Jörn Von Lucke
Zeppelin University

Legal Drafting supported by AI system for improving quality, effectiveness, efficacy, semantic annotation (e.g., Law as Platform)

Decision support System/AI for making better the legislative process and anticipating needs of the society (e.g., same-sex marriage, end of life, etc.)

Legal System data analytics for understanding the legislative hidden knowledge (e.g., patterns, frequent errors)

Figure 3: Different applications of AI in Legislative domain.
LLMS IN THE CONGRESSIONAL WORKFLOW
A TIERED APPROACH

- Low-level administrative tasks (speeches, correspondence)
- Casework
- Hearing preparation and issue research (witnesses, questions)
- Parsing policy models, research
- Legislative drafting
- Policy modeling, policy options
- Real-time policy oversight
THE CONVERSATION

- Introduction
- How your organization or office is thinking about new LLM tools/AI in the Legislative Branch
- Your major questions or concerns on the topic
- What would you like to see in an ongoing collaboration with this group?
POSSIBLE TIMELINE
FOR AI/LLM TOOLS IN FIRST BRANCH OPERATIONS

IMMEDIATE (~3 months)

- Enable experimentation, clarify guidance for incorporating new tools
- Share information (example: House AI Working Group)
- Learn from other industries or legislatures
- Monitor changes in advocacy practices and constituent engagement; look for inauthentic campaigns
SHORT-TERM (3–6 MONTHS)

● Hearings in relevant committees (Senate Rules, Committee on House Administration)

● Studies commissioned from experts, including GAO Innovation Lab

● Learning from private sector innovation, international examples

● CRM vendors may begin to incorporate AI tools into product offerings

● Encouraging prototypes (including with House Digital Services)
MEDIUM-TERM (6-18 MONTHS)

- Significantly invest in modernizing technical/IT systems to integrate flows of information and automate routine processes.
- Create new multi-disciplinary teams to tackle complex policy and oversight work and relieve pressures on existing staff.
LONG-TERM (36+ MONTHS)

- Fundamentally change the way we interact with constituents, make laws, model policy, conduct oversight
THANK YOU!