

Version: 4/10/2025

Goal of the FoRGED Act Collaboration Website

This website was developed as part of a strategic collaboration between the George Mason University Baroni Center for Government Contracting and the Defense Acquisition University (DAU). Its primary objective is to explore, demonstrate, and critically evaluate the potential of artificial intelligence (AI) technologies in analyzing and interpreting legislative bills. Through this initiative, the site seeks to deliver detailed assessments of legislative proposals, focusing extensively on the strengths, weaknesses, operational impacts, implications, and long-term effectiveness of proposed legislation. The ultimate aim is to generate actionable insights and facilitate comprehensive knowledge transfer, enabling informed decision-making and optimized legislative understanding among stakeholders.

The Forged Act was carefully selected as the inaugural subject of this project due to its high degree of alignment and direct relevance to the strategic missions, operational priorities, and objectives of both the Baroni Center and the DAU. The project leverages advanced AI-driven tools and methodologies to significantly enhance the depth, precision, and efficiency of legislative analyses offered to the defense acquisition community. By pioneering AI applications in legislative review, the initiative aims to establish a robust foundation for future analytic endeavors within this space.

AI-Based Analysis of the Forged Act

The comprehensive AI-driven analysis of the Forged Act integrates multiple sophisticated methodologies and advanced technologies designed specifically to generate a nuanced, detailed, and highly accurate understanding of the legislative bill. Tailored explicitly to address the needs and strategic interests of the Department of Defense (DoD), the AI-driven analysis aims to uncover critical insights, evaluate comprehensive operational and strategic impacts, and propose evidence-based, actionable recommendations. Users of the website have access to five interconnected, yet distinctly purposed, analysis methodologies: Automated General Introduction video, General Recommendations FAQ, Deep Analysis, Podcast Generation, and Repeal Analysis. Each method is developed to address specific analytical dimensions, thereby providing a holistic analytical framework.

Errors and Hallucinations

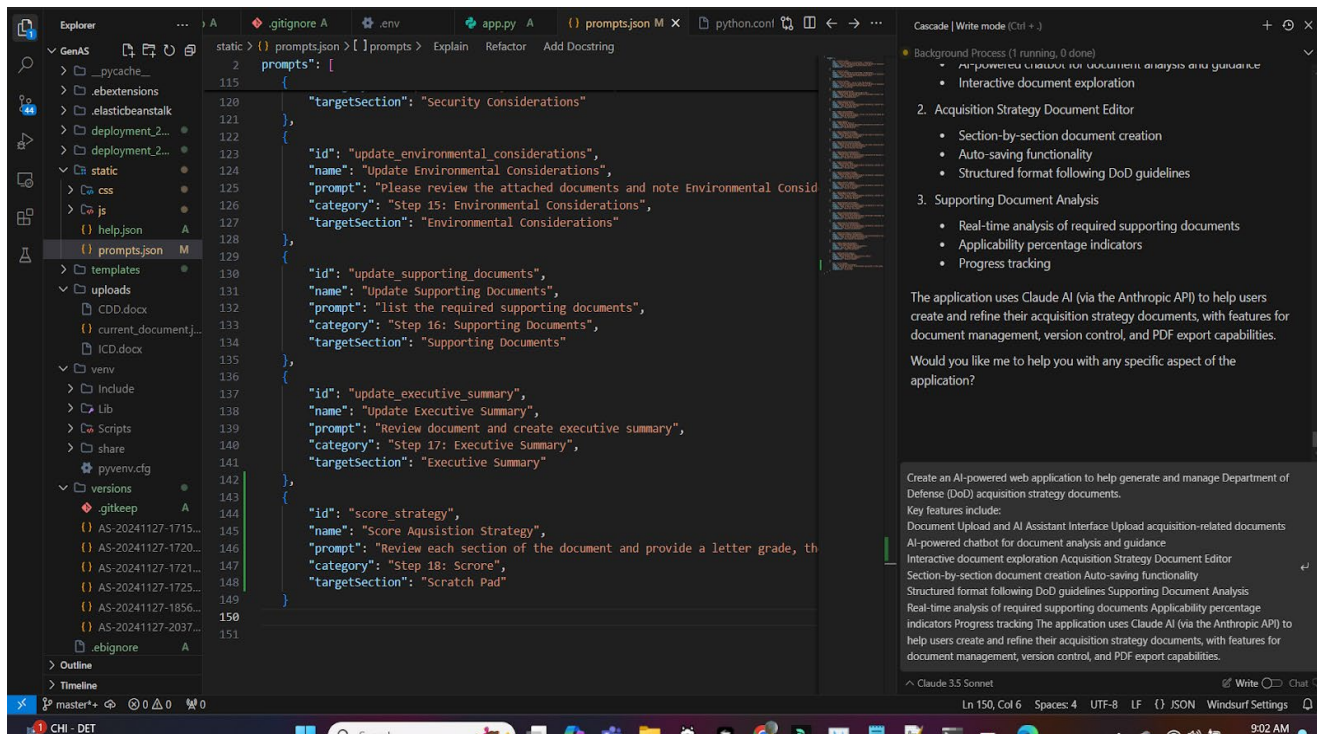
Note: The information created by these tools has not been verified and may contain errors. The analysis attempted to provide links to authoritative source when possible. However, the reader should not assume the material in this document is an authoritative source.

The website

The website was created using the AI code generation tool called “Windsurf”. I originally created the webpage using the Microsoft word “Save as html” feature. However, this was cumbersome. Instead, I discovered that saving the AI generated document as “Markdown”, and then using the markdown file as input to WindSurf, the process worked much better.

The benefit of Windsurf was not only the creation of the webpage, and additional features (e.g. Serverless Comments). But windsurf was also able to run remote AWS commands and load and provision the website.

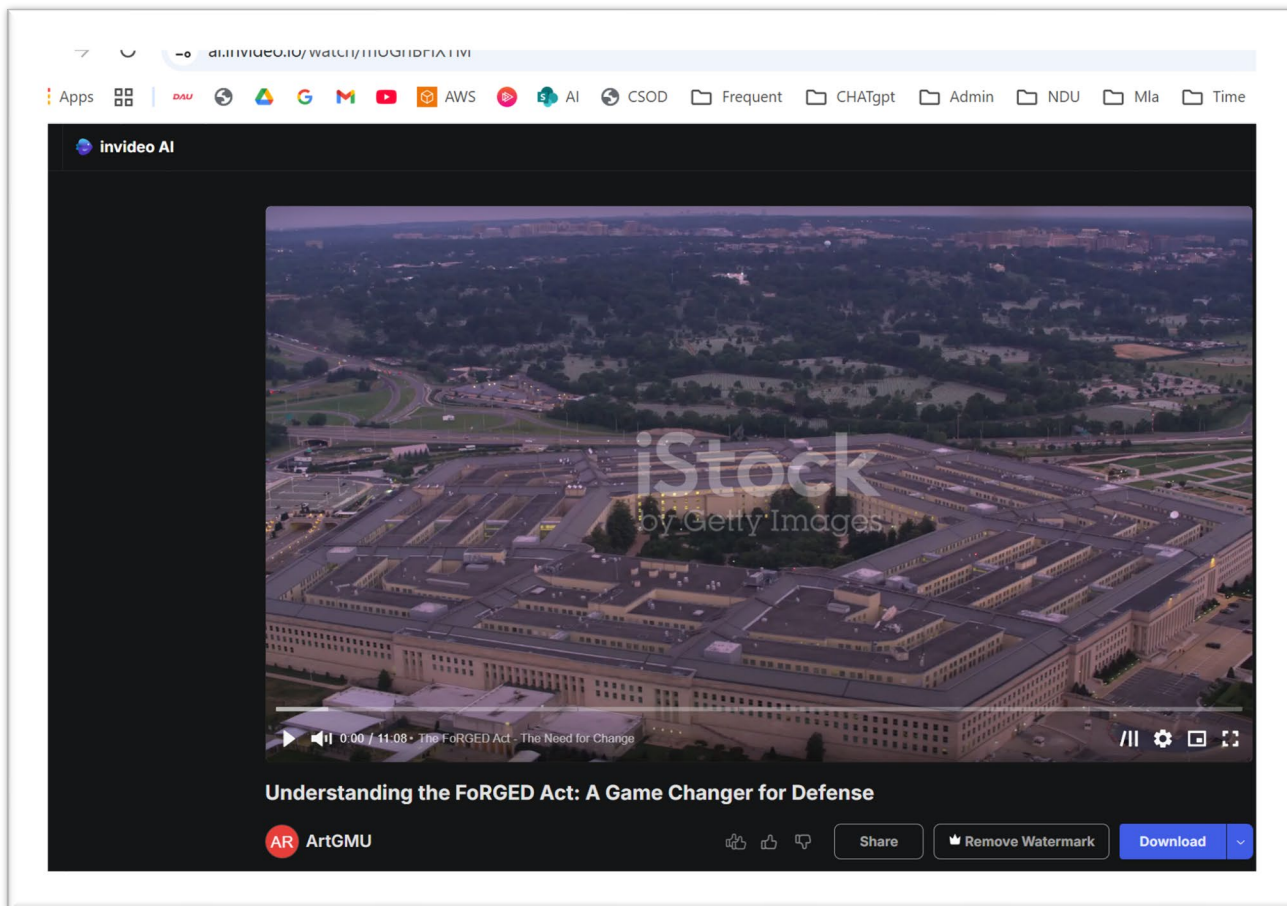
Figure.7_Windsurf.Example



Automated General Introduction video

In the introduction section on the website, a video that introduces the Forged Act is provided. This was created using a simple prompt on a product called “inVideo.” The generated introduction video was created with the free version of the inVideo product, and uploaded to youtube as a hosting platform. This video provides an interesting “proof of concept” of an instructional video. It serves its purpose to introduce the Forged Act, however, it can definitely be improved with multiple interactions and customization.

Figure.8._InVideo.Video.Creation



General Recommendation FAQ Overviews

General recommendations are provided for review on the website and indexed via the left panel TOC. These are intended to provide a high level structures analysis of each recommendation. They include the following features:

- Structured spreadsheet prompts were methodically utilized to guide the generation of comprehensive and detailed recommendations that cover Titles One through Five of the Forged Act. These structured prompts were built using excel spreadsheet and covered the same series of questions for each recommendation, interjecting the different recommendation titles into each prompt. This then leveraged advanced Large Language Models (LLMs) to produce initial insights, ensuring a robust analytical foundation.

Figure.8_Example.Excel.Creating.Prompt

A	B	C
		What is "
		"?
1 Section 201:		What is "Section 201:"?
2 Section 202:		=\$C\$3 &B6 &\$C\$4
3 Section 203:		What is "Section 203:"?

- The prompts systematically address a range of critical factors, including historical legislative context, detailed examination of potential operational and strategic

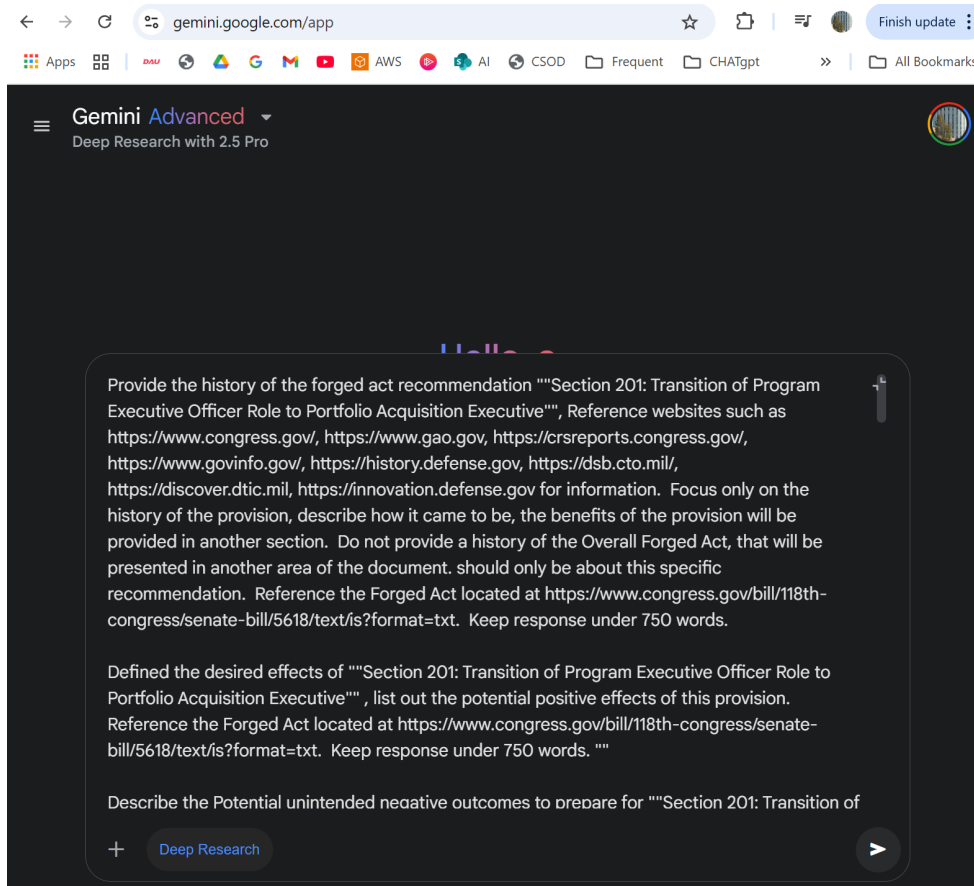
impacts, stakeholder concerns and priorities, required resource allocations, and clear methodologies for measuring the successful implementation and effectiveness of legislative outcomes.

Deep Analysis

Each recommendation (e.g., Section) includes a hyperlink to a pdf that created a “Deep Analysis,” the following are the attributes of these analysis.

- The Deep Analysis component significantly expands on the initial general recommendations, addressing identified gaps, complexities, and additional areas for consideration that subject-matter experts and analysts highlight.
- Generally, Google's Gemini Deep Research tool is strategically employed to formulate targeted, role-specific questions, ensuring that analyses comprehensively address nuanced, operational, and strategic concerns relevant to various stakeholders within the DoD and acquisition communities. The Gemini analysis took in excess of 5 minutes of processing time to complete each analysis. Note that in some cases the Gemini threshold was exceeded, and then the OpenAI O3 deep analysis was used, this took over 15 minutes per analysis. This is noted in the output.
- These Deep Analysis provided Detailed studies, investigative analyses, footnoted references, and comprehensive assessments are meticulously documented using Google Docs, ensuring thoroughness and transparency. These finalized documents are subsequently converted into downloadable PDF formats, easily accessible directly from the website.

Figure.9._Gemini.Deep.Research



Podcast Generation

The generation of Podcast through the Google NotebookLM facility provided an excellent overview of each Forged Act recommendation. The following features exist:

- Google's NotebookLM technology was employed to transform textual recommendation overviews into concise, informative podcasts.
- Podcasts clearly and explicitly differentiate between AI-generated insights and official legislative mandates, fostering transparency and aiding user comprehension.
- The podcast format allows users to conveniently engage with complex legislative analysis through accessible, easily digestible audio content, supporting diverse learning preferences and promoting enhanced overall understanding and engagement.

Figure.0__NotebookLM

The screenshot displays the Google NotebookLM interface for a document titled "Section 310-317". The interface is divided into three main sections: Sources, Chat, and Studio.

- Sources:** A list of sources is shown on the left, including "Enhancing Weapon Systems A...", "ForgedAct.pdf", "New Ask a Professor database...", "Section 317" (checked), "Section103.wav", "x Section 310 Analysis", "xSection 311 on Commercial Tr...", and "vSection 312 Analysis".
- Chat:** The central chat window displays the title "Section 310-317" and a summary: "The provided document, labeled S. 5618 or the FoRGED Act, outlines proposed changes to defense innovation and acquisition processes. This bill aims to promote efficiency and reform within the Department of Defense by repealing outdated laws, modifying acquisition requirements, and encouraging the use of commercial products and nontraditional contractors. The legislation also seeks to restructure defense budgeting, enhance competition in the defense industrial base, and revise software acquisition pathways. Ultimately, the FoRGED Act intends to streamline how the military develops and obtains new technologies and capabilities." Below the summary is a chat input field with the text "Start typing..." and a "1 source" indicator.
- Studio:** The right-hand panel shows the "Studio" section, which includes an "Audio Overview" section with a "Deep Dive conversation" option (Two hosts (English only)) and a "Generate" button. Below this is a "Notes" section with an "Add note" button and several pre-generated notes, including "Enhancing Weapon Systems Acquisition..." and "New Note".

Repeal Codes Analysis

The repeal code analysis address 283 repealed code, and build both a summarized HTML page, and detailed spreadsheet with the analysis. This is accessed through hyperlinks in the Section 101 analysis. They had the following features:

- Section 101 of the Forged Act is specifically analyzed in depth, with detailed discussions presented clearly in both HTML and downloadable PDF formats.
- The analysis extensively examines the implications and intricacies associated with repealed legislative provisions, offering detailed evaluations of FAR (Federal Acquisition Regulation) and DFARS (Defense Federal Acquisition Regulation Supplement) implementation, comparative policy analyses, and clear articulation of the potential impacts on existing and future DoD acquisition procedures, operational responsibilities, and personnel roles.
- This detailed repeal analysis ensures informed decision-making regarding legislative amendments and minimizes disruptions, thereby enhancing the efficiency of operational transitions within the acquisition community.
- Two versions of the Repealed information are available for viewing. A Quick Access “HTML” version, and the more exhaustive “PDF” version. The PDF version is available from a Hyperlink on the Repeals HTML page.

The following information is available in the two versions.

HTML Version

- Column 1: Summarized histories of repealed provisions.
- Column 2: Detailed information on FAR/DFARS implementation.

PDF Version

- Column 1: Reference name of Repealed Provision
 - Column 2: Summarization of Repealed Provision (2024 Version)
 - Column 3: FAR/DFARS Implementation of Repealed Provision
 - Column 4: Is there discussion in FORGED Act on Repeal of Provision?
 - Column 5: Is there Bid Protection and Court of Claims Discussion?
 - Column 6: Are there DoD Instructions or Policies on Repealed Provision?
 - Column 7: Are there Acquisition Memos Related to the Repeal?
 - Column 8: Impact of Repealing the Provision on Joint Programs
 - Column 9: Comparison of Pre-Repeal and Post-Repeal Policies
 - Column 10: effect on roles and responsibilities of DoD Acq officers?
 - Column 11: Changes in Acqu procedures due to the repeal
 - Column 12: Provide the full text version of repeal
- Initial analytical outputs generated by the Grok3 LLM are carefully structured and formatted as Markdown documents. Numerous LLM were tested, however, the ability to run large multi-

statement prompts excelled in the Groks3 environment. In this manner the 283 Repeals could each have 10 prompts posted (2,830 prompt request) and the 31 recommendations could each process 8 prompt request (248 prompts). Many LLM would either fail to process this volume of prompts, the Grok3 platform proved the most reliable with this type of high volume prompt request analysis. Subsequently, these outputs undergo a rigorous refinement process using the Claude 3.7 LLM through the Windsurf platform, ensuring that all presented recommendations achieve optimal clarity, relevance, precision, and usefulness.

Additional Material

There are numerous types of material that useful for the Forged Act Analysis. A free form “S3 Bucket” was provided in the cloud, for random related documents to be included. Currently the following types of documents have been added, and are expected to be added in the future.

Transcripts of Podcast: For people looking for a exact statement, or wanted to debate a podcast comment, the transcripts are provided.

Deep Analysis: As mentioned before, the deep analysis provides for footnoted “Deep” analysis of the subject

Judge Documents: One manner to verify the content of the website, is to have alternate LLM review the content from each other. Currently there are examples of Google Gemini validating the content of the podcast, and OpenAI o3-mini validating the Grok3 overview, and the Gemini Deep Research Deep Analysis.

Emails: Email can be added to the “Additional Material” to provide additional crowd source feedback. If the “Comments” become volumous or repetitive, then may be consolidated into the “Additional Material”.

Updates: As update happen, they can be added to this directory

Crowd-Sourced Feedback Platform

After internal review by experts, there was criticism that a “Human Review” was not included in the analysis. In order to provide this valuable insight, and feedback mechanism was added to the website. This feature had the following intentions:

- Recognizing the critical need for continuous refinement through human feedback, the website features an intuitive and robust feedback mechanism.
- Users can engage with two distinct feedback channels: the Comment Block, offering real-time, interactive visual feedback capabilities powered by AWS Amplify and DynamoDB; and the Mail Link, a traditional, email-based feedback system designed for static content pages.

Note: If the website is provisioned as a Static page, then only the mail link will be available for collaboration

- Collected user feedback is strategically employed to inform continuous improvements and iterative refinements of the analyses, ensuring sustained accuracy, responsiveness, and alignment with evolving user needs and expectations.
- This website is not authorized to support CUI or classified data. The end user should NOT share any such information.

Comments

Figure. 1_CrowdSourcing

Visitor 3/30/2025 9:43:11 PM

test

Add a comment...

Submit

Email feedback about Section 101

Future Directions and Enhancements

The following plan exists for the analysis:

- Moving forward, the initiative plans to expand its analytical scope to include additional legislative bills, thereby continuously broadening the knowledge base and enhancing the analytical capabilities available to stakeholders.
- Upcoming developments will also explore the integration of additional advanced AI technologies, further improving the depth, accuracy, and utility of legislative analyses.
- Ongoing collaborative engagements with stakeholders from government, academia, and industry will continually inform and shape the development trajectory of the platform, ensuring sustained relevance, innovation, and strategic alignment.

Ultimately, this comprehensive and multifaceted AI-driven initiative significantly enriches decision-making processes, legislative comprehension, and knowledge dissemination capabilities, reinforcing the critical strategic missions and objectives of both the Baroni Center and DAU, and serving as a model for future innovations in legislative analysis.

Appendix 1: Example Overview Prompt

Prompt (multi-prompt sent as a single request)

- Provide the history of the forged act recommendation {FoRGED Act Section Header}, Reference websites such as <https://www.congress.gov/>, <https://www.gao.gov>, <https://crsreports.congress.gov/>, <https://www.govinfo.gov/>, <https://history.defense.gov>, <https://dsb.cto.mil/>, <https://discover.dtic.mil>, <https://innovation.defense.gov> for information. Focus only on the history of the provision, describe how it came to be, the benefits of the provision will be provided in another section. Do not provide a history of the Overall Forged Act, which will be presented in another area of the document. should only be about this specific recommendation. Reference the Forged Act located at <https://www.congress.gov/bill/118th-congress/senate-bill/5618/text/is?format=txt>. Keep response under 750 words. ""
- Defined the desired effects of {FoRGED Act Section Header} , list out the potential positive effects of this provision. Reference the Forged Act located at <https://www.congress.gov/bill/118th-congress/senate-bill/5618/text/is?format=txt>. Keep response under 750 words. ""
- Describe the Potential unintended negative outcomes to prepare for {FoRGED Act Section Header} Reference the Forged Act located at <https://www.congress.gov/bill/118th-congress/senate-bill/5618/text/is?format=txt>. Keep response under 750 words. ""
- Describe the Potential unintended negative outcomes to prepare for {FoRGED Act Section Header} Reference the Forged Act located at <https://www.congress.gov/bill/118th-congress/senate-bill/5618/text/is?format=txt>. Keep response under 750 words. ""
- Note the Federal personal that will be most affected by the {FoRGED Act Section Header} , Include the manner that they will be impacted Reference the Forged Act located at <https://www.congress.gov/bill/118th-congress/senate-bill/5618/text/is?format=txt>. Keep response under 750 words. ""
- Identify stakeholders who will oppose {FoRGED Act Section Header} , and provide the rationale on why they will oppose it Reference the Forged Act located at <https://www.congress.gov/bill/118th-congress/senate-bill/5618/text/is?format=txt>. Keep response under 750 words. ""
- What additional resources (e.g., funding, training, personnel) will the DoD require to successfully implement {FoRGED Act Section Header} Reference the Forged Act located at <https://www.congress.gov/bill/118th-congress/senate-bill/5618/text/is?format=txt>. Keep response under 750 words. ""
- How should the DoD measure the success or effectiveness of the recommendation {FoRGED Act Section Header} once implemented? Reference the Forged Act located at <https://www.congress.gov/bill/118th-congress/senate-bill/5618/text/is?format=txt>. Keep response under 750 words. ""
- Are there alternative approaches that could achieve similar outcomes more effectively or efficiently than {FoRGED Act Section Header} ? Reference the Forged Act located at <https://www.congress.gov/bill/118th-congress/senate-bill/5618/text/is?format=txt>. Keep response under 750 words. ""

Recommendation Text from Forged Act follows:

####

{ Text of recommendation from Forged act }

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Appendix 2: Deep Analysis Prompt for “Specific Question” and example

Example of prompt template creating specific questions

What questions related to {FoRGED Act Section Header} will the AI analysis process have sufficient information to appropriately answer. Also, the question should be highly relevant to the role of the DoD Acquisition Workforce.

Example of prompt template for Section 202

Prompt:
Prompt: what questions related to "Section 202: Amendments to the Joint Requirements Oversight Council" will the AI analysis process have sufficient information to appropriately answer. Also, the question should be highly relevant to the role of the DoD Acquisition Workforce.

Example created “Specific Questions” for Section 202

Specific Question1: How have the recent amendments to the JROC changed the process or timeline for validating joint capability requirements, and what are the direct implications for Program Managers preparing documentation like the Initial Capabilities Document (ICD) or Capability Development Document (CDD)?
Specific Question2: What are the key changes in JROC roles or authorities that acquisition professionals involved in requirements generation and analysis need to understand?

Appendix 3: Podcast Suggestion

This is an excerpt of a recommendation from the Forged Act, provides the listener guidance on how to implement this recommendation, and how to prepare. Start by mentioning the Section number in review, Note the "Mitigations" and the "Measures of Success" are "suggested by the AI" , and the "Alternative Approaches" are "Potential Alternative Approaches for the AI". Note that this Podcast is one of a podcast series that will represent all the recommendations in the Forged Act.

Appendix 4: Contributors

- Arthur Nicewick, AI Researcher, Developer, System Engineer Professor, Defense Acquisition University
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- Reviewers’ names provided upon request