Generative Design Contest

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PURDUE UNIVERSITY | The Data Mine

LOCKHEED MARTIN

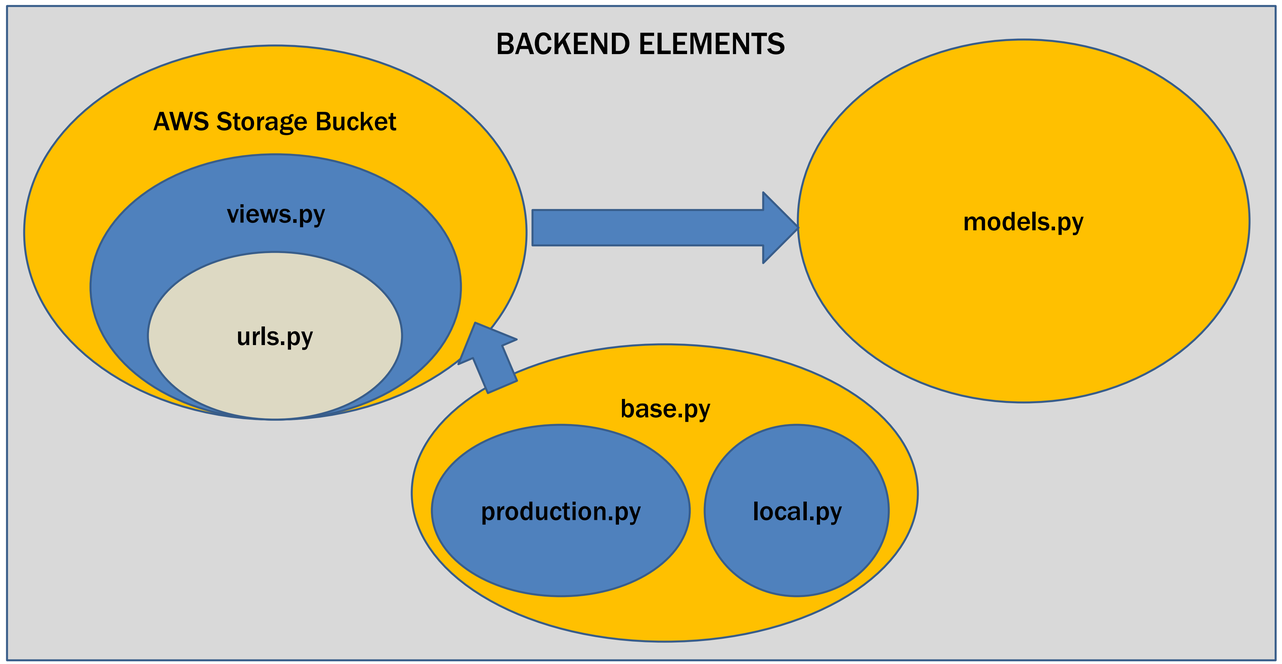
Assigned Problem

Lockheed's Generative Design Contest will give people time to design, manufacture, and test hardware. The start of the contest would be months before the voting. A length of time will be open for PowerPoint submission entries then after the deadline, voters will have time to see the entries and select.

Generative Design

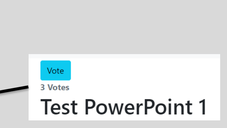
- Generative design is an innovative technology that uses artificial intelligence and algorithms to generate optimized and innovative designs for various products and systems.
- It works by defining constraints and objectives, such as material properties, manufacturing limitations, and functional requirements, and then using machine learning and optimization techniques to generate a wide range of potential design solutions.
- Generative design can significantly speed up the design process, reduce costs, and improve product performance by exploring design options that may not have been considered using traditional design methods.
- It is particularly useful in fields such as architecture, engineering, and manufacturing, where there are many variables to consider when designing a product or system.
- Generative design can lead to more sustainable, efficient, and stronger products, as well as improved customer satisfaction.
- It is important to promote because it can revolutionize the design process, enable faster product development, and create better and more optimized products.

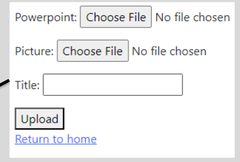
BACKEND ELEMENTS

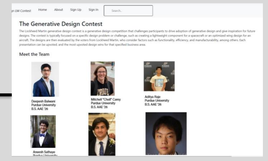


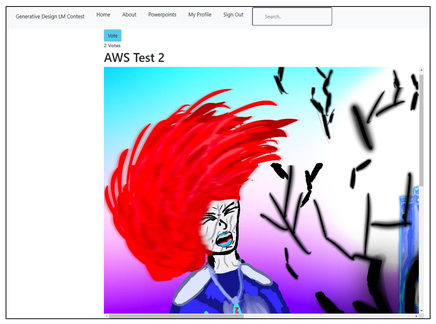
FRONTEND ELEMENTS AND INTERACTIONS

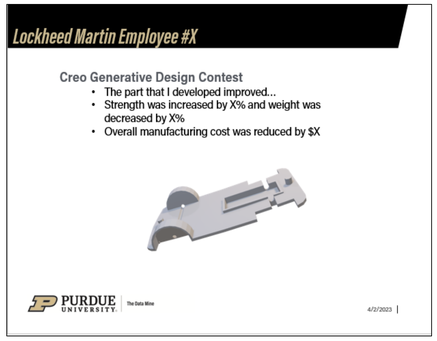
- Visually appealing toolbar
  - CSS , and HTML
  - Visual of search bar before sign in and after
- Vote button
  - Iterates voting counter
  - Only one vote per user
- Searching button
  - Being able to find entries by title or submitter
- Submission button
  - Can submit their Creo embedded PowerPoint File, thumbnail, and submission title
  - File submissions other than .pptx and .jpg will not be accepted
- About section
  - Allows all users to learn about the process of generative design and what it means in the context of Lockheed Martin
  - Introduces the users to the development team behind the scenes











BACKEND/FRONTEND UNIFICATION