

Continuous Community Review Compendium: Jacks Peer Pages



JACKS
PEER PAGES



Haley Kloss
hrk85@nau.edu



Haley Berger
heb229@nau.edu



Tyler Austin
tla249@nau.edu



Jeremiah Lopez
jel469@nau.edu

CS Project Mentor
Md Nazmul Hossain

Project Sponsor
Dr. Keith Nowicki

The Decay of Scientific Publication

- Science is the backbone of modern society

- The systems by which people share discoveries are breaking down

- This has gotten steadily worse over time

- The Jacks Peer Pages Project Will:

- Modernize the peer review process

- Train a new generation of researchers

Our Client: Dr. Keith Nowicki

Dr. Keith Nowicki:

- Professor in the physics department
- Involved in research
 - Published works
 - Conference contributions

Foundational proposal:

- Presented by four departments at NAU
- Will require graduate students to produce three peer reviews per semester

The Current System of Scientific Publication

Peer Review:

- Journal reaches out to two to three experts in a field
- Have experts evaluate if a manuscript is accurate and meaningful
- If so, publish

Literature Review:

- Search currently published literature
- Become knowledgeable about the relevant material that has been released to date

AI Usage:

- LLMs widely being used to write papers and edit
- Approximately 70% of papers published today having been partially written or edited by AI

The Big Picture Issue with Scientific Publication

The modern system of peer review was standardized 75 years ago:

Science has evolved and left it behind

The scientific community is now too big for the current system

Researchers are pressured to publish much more

The rise in LLMs has changed scientific publication:

It has made the current system more outdated.

It has further broken trust in published literature

Systemic failures have arisen in terms of:

Peer Review

Literature Review

LLM Usage



Peer Review

Time intensive, unpaid, and anonymous

Varies in quality based on the merit and ethics of the reviewers

Isn't taught in most curriculums

Young researchers have little access to peer reviews.



Literature Review

Database subscription costs are prohibitively expensive

There are nearly 3.5 million new publications each year

Literary analyses have no trusted, shared community
(Must be redone by every reader)



AI (LLMs)

AI usage is rampant

Often compromises the factual accuracy of papers

No set of training data for it that is not high quality and AI free



The Solution: Jacks Peer Pages

Project Goals:

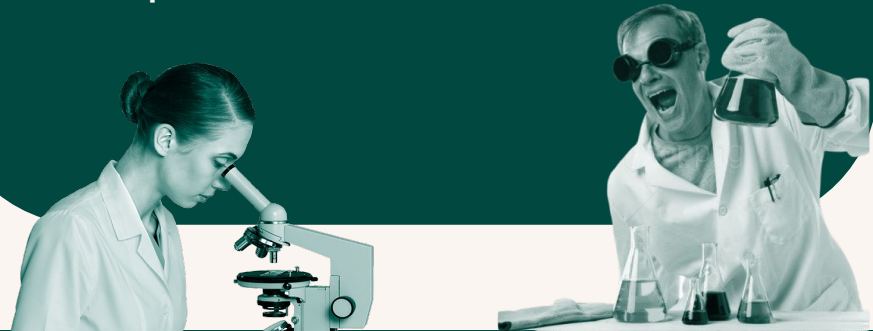
Facilitate better methodology in scientific literature in a collegiate setting

Create a digital collection of papers where students can easily share their peer reviews

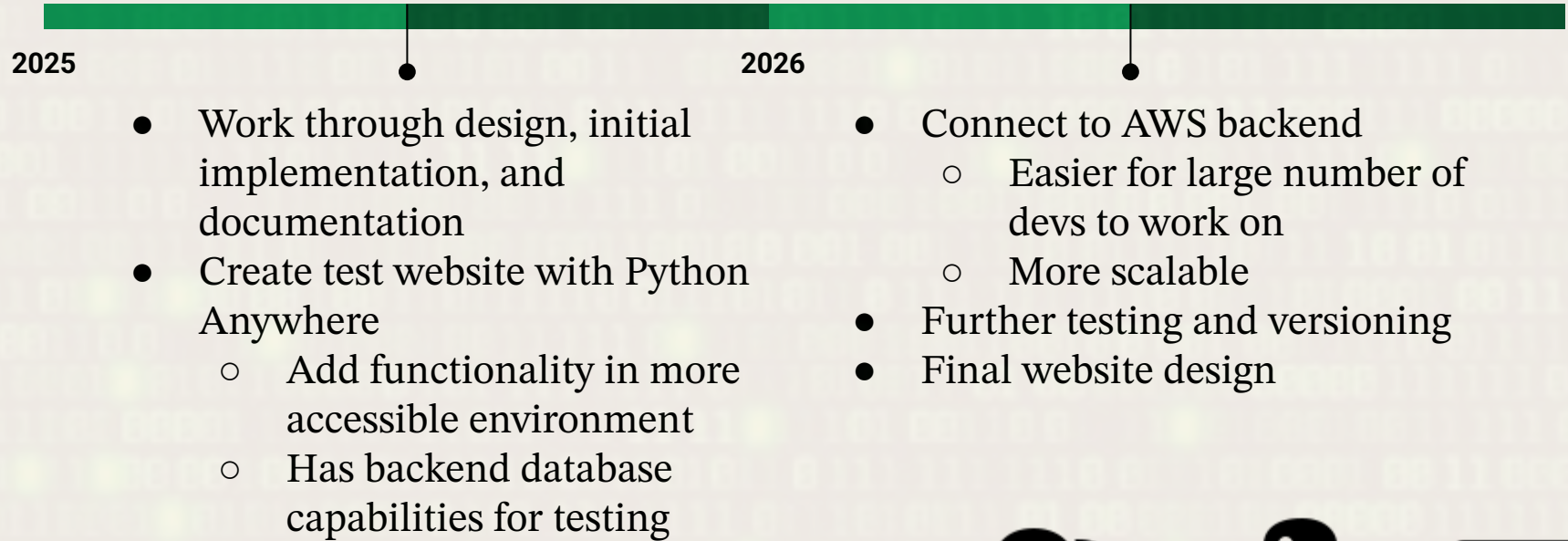


Outcomes:

1. Train new researchers
2. Searchable access to peer reviews
3. Database of reliable and academically-verified sources
4. Assist with proposed curricular requirements



Plan for Development



Conclusion

- Science the foundation of modern society, and must not left to degrade into a poor facsimile of itself.
- We are excited to have the opportunity to help counteract the issues faced by researchers by creating a digital resource for training PhD students, sharing credited peer reviews and literature reviews, and a database of verified scientific knowledge.
- By addressing the issue in academia, we will be able to help train young researchers to uphold the integrity of scientific literature.



Thank You...

Any Questions?



Team Website



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