
Nvara

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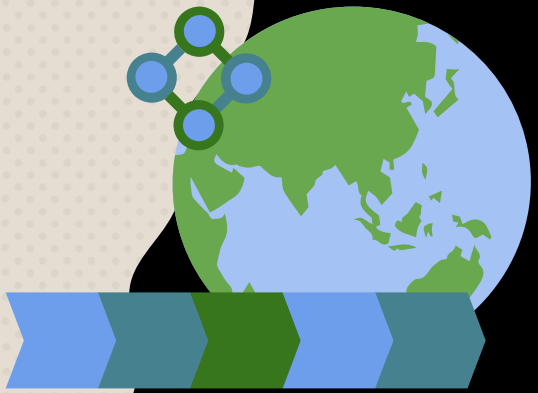
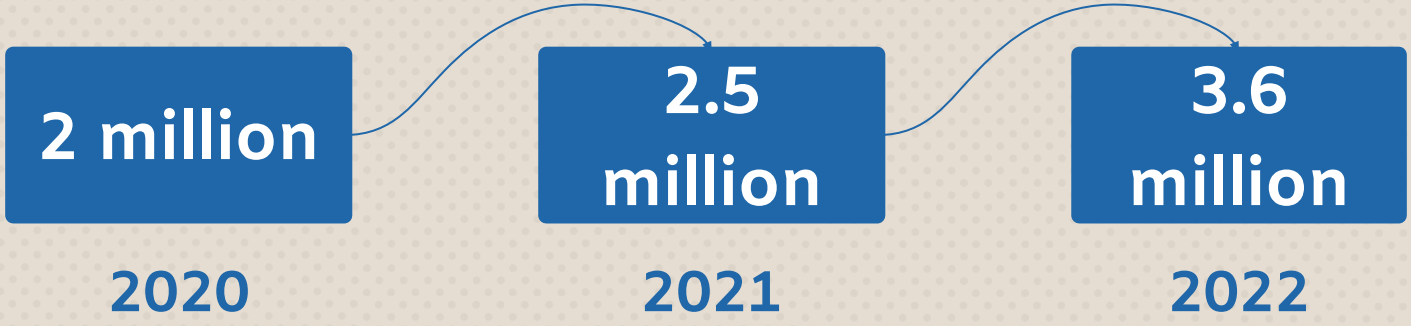
The Problem



Number of Scientific Research Papers Published



Number of Research Papers published have exponentially increased over the past 5 years due to pressure from universities on researchers and professors

Now what does this mean?

1. **Quantity over Quality:** The current research landscape prioritizes output volume, leading to lower quality papers plagued by sloppiness, misinformation, and improper citations. This undermines the reliability of academic publications.
2. **Compounding Misinformation:** Poorly researched papers are often used as reference points in further studies, compounding misinformation and degrading the overall credibility of scientific research.
3. **Global Impact:** The decline in research quality slows down innovation and scientific discovery on a global scale, ultimately affecting industries, academia, and technological advancement.
4. **Trusted Yet Unreliable:** Research papers are considered the gold standard in academic references, yet their increasing unreliability poses a significant challenge. **Nivara** aims to solve this by ensuring better validation and integrity of published research.

What We Do

Research Paper Review. Redefined.

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The Solution

1. Expert Sign Up And Verification using their ORCID profile
2. Publications And Articles Are Pulled Using News API
3. BERT Model Verification
4. Expert Review
5. User Access & Reporting

Our Features

Researcher Rank

We will use the ORC ID API to review the educational qualifications, use NLP to analyze their past peer review reports and published papers, and use that to rank the reliability of each publisher.

AI Analysis

Our model with the BERT API scans the new research papers trained on a plethora of papers with high scores on ORC ID.

Google Extension

Currently we have our own paper library, but in the future, as we improve our model, we will become an extension that can be easily run on any paper for verification.

Tech Stack

- Django
- BERT API
- Web Scraping
- ORC ID API
- Firebase

Researcher Rank

There are two different sign up pages for users and experts, the experts page required the expert's ORC ID which is used to give credibility to their work, we use to ORC ID to see their work and the number of research papers published which must be more than 5.

Data Sources:

Pulls data from ORC ID, Crossref, and Dimensions and bundles them into an accessible user interface:

Main metrics used for analysis:

h-index (impact of published work)
i10-index (publications with 10+ citations)
Peer-review (history and affiliations)

- NLP Models: Analyze research abstracts to identify expertise areas and peer and research reviews given to the author.
- Anomaly Detection: Identifies self-citation patterns or citation clusters to prevent inflated metrics and checks reliability of citations.
- Scoring System: Aggregates publication impact, network strength, and review history into a final credibility score (1–5 stars).

AI Features

- An additional AI check is carried out to review if the research paper is fake or accurate information. This check is combined with the researcher's reviews; our model understands the reviews and re-analyzes its decision.

- We ask the experts to enter a summary of the research paper, and we use an AI model to check if the summary matches with the research paper/article or if it is AI-generated. If it does, we know that the expert has properly read the article.

We are using the **BERT**, a specific large transformer masked language model, API for
both of these features

Google Extension (Future)

- Currently we are a standalone product with our own web app where past papers that have been marked as credible by our AI model and expert analysis have been curated.

- In the future, we will transition from an LLM API to our own developed model, at which point our product will become infinitely more accessible and more efficient at tackling misinformation by utilizing our own model to scan all new published papers, news articles, and other scholarly writing on their own websites and provide a researcher ranking and credibility check, fact checks, and a better level of AI analysis.

PRODUCT DEMO

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Business

Financial Information

1. As a standalone product with our AI analysis and expert review, we aim to earn by charging universities and research paper publication platforms to curate their paper library and provide our services to them on a monthly or yearly subscription basis.

2. Upon building a well developed ML model that doesn't rely on an external LLM API, we will transition our product into a Google extension with a free and paid version for individuals who read research papers (researchers, scientists, professors, etc.), where the free version will contain a basic review and researcher rank, and the paid version will contain our advanced ML models and a more detailed review of each paper to determine its reliability. Our pricing will be individual and university based. Universities can purchase a subsidized subscription for each employee, and individuals can buy a higher priced individual subscription to our Pro Model.

3. Our go-to-market strategy involves pitching our initial product to universities and publishing companies to gain enough funds to create our final Google extension with an internal AI model that will be available to individuals and universities.

THANK YOU