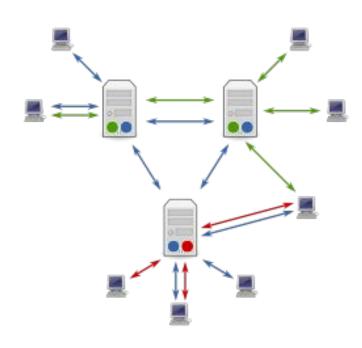
Improving Usenet Archives: How to Process Metadataless Materials

Kurt Lemai and Brian Mmari

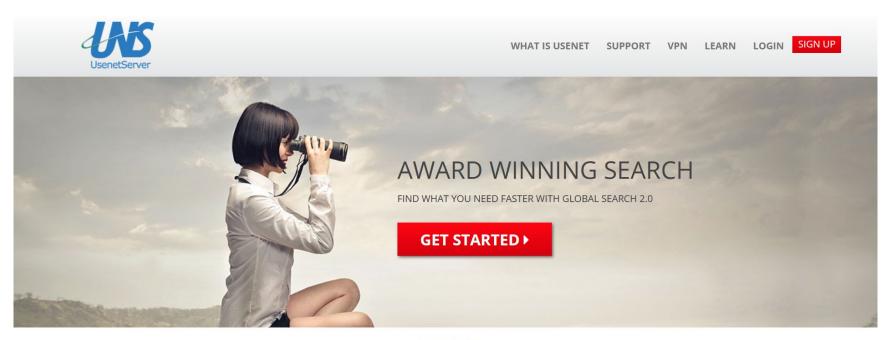
What is Usenet?

Social Media before social Media!

```
slrn 0,9,8,0 * Press '?' for help, 'q' to quit, * Server: localhost
                                 cool part
                                                                    9/222 (4%)
 [692/698 unread] Group: comp.text.tex
 rom: David Kastrup (dak@gnu.org)
lewsgroups: comp.text.tex
Subject: Re: cool part
Date: 24 May 2004 22:06:31 +0200
Christian Gammelgaard <cgammelXXX@stud.auc.dk> writes:
\usepackage{graphicx}
\renewcommand{\thepart}{\reflectbox{\Roman{part}}}
should be very cool.
1252 : Re: cool part
                                                                  - 1/20 (All)
SPC:Pgdn B:PgUp u:Un-Mark-as-Read f:Followup n:Next p:Prev q:Quit
```



How can we access usenet today?



AS SEEN IN:











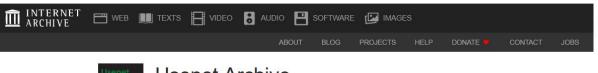
Alt Comp Microsoft Misc Net News Rec Sci Soc Talk

Posts Groups

Q search subjects & author names

ALTERNATIVE GROUPS





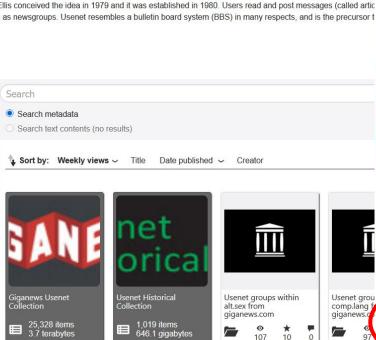
Usenet Archive

Usenet is a worldwide distributed Internet discussion system. It was developed from the general purpose UUCP dial-up netw Truscott and Jim Ellis conceived the idea in 1979 and it was established in 1980. Users read and post messages (called artic categories, known as newsgroups. Usenet resembles a bulletin board system (BBS) in many respects, and is the precursor t More..

COLLECTION ABOUT

79,449 Results

> Filters





What have other people done?

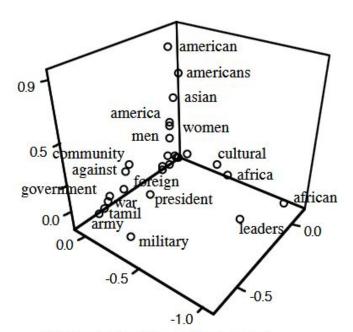


Figure 2.6: Example of conversation map interface

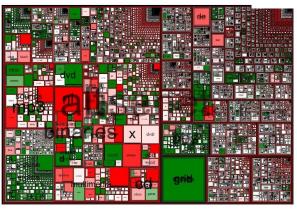
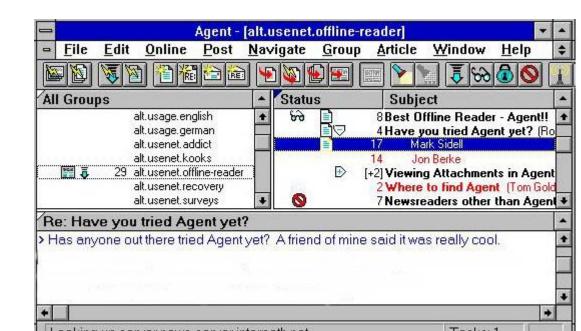


Figure 2.9: Sample tree map [63]

(a) Factor loadings of topic words

What are our goals?

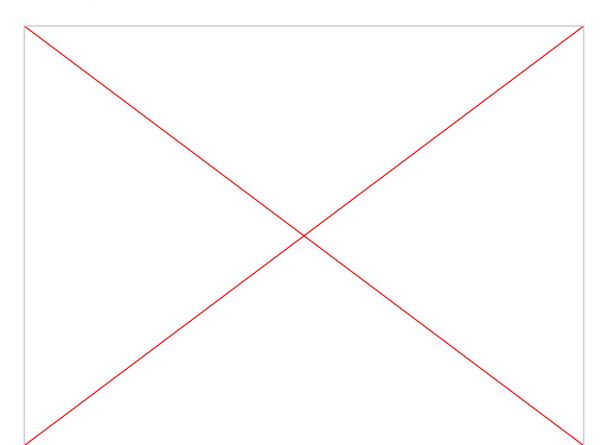
- Find better ways to search usenet
- Visualize usenet with contemporary methods
- Enable new ways of browsing usenet



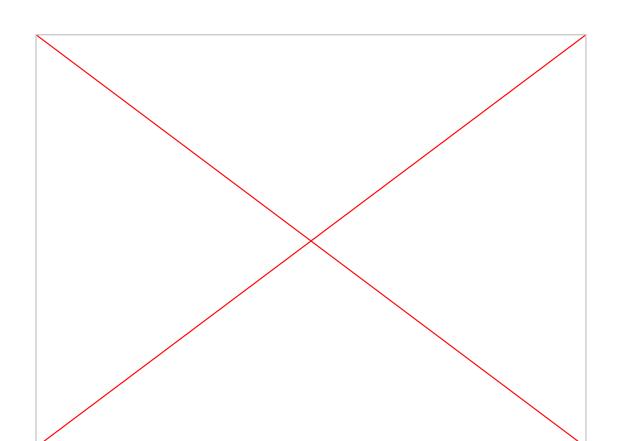
Methods

- 20 Usegroups Dataset cleaned from Huggingface
- Vectorize Messages (all-MiniLM-L6-v2)
- Store Vectors into a Vector Database (FAISS)
- 2D Projection (UMAP)
- Vector Search
- Retrieval Augment Generation (gpt-4o)
- Deploy on Dash App with ngrok as server

Vector Mapping With UMAP 2d Projection

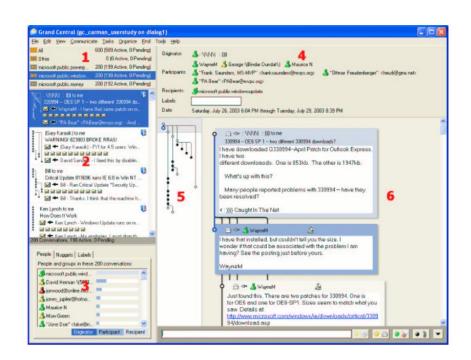


Vector Search and RAG



Limitations and Future Improvements

- This is not a system meant to be comprehensive it is a heuristic
- Bias in vectorization
- Expand to a larger dataset
- Consider other forms of mapping
- Linking RAG Chat to texts



References

- Ibrahim, Rowaida Khalil, Subhi R. M. Zeebaree, Karwan Jacksi, Mohammed A. M. Sadeeq, Hanan M. Shukur, and Ahmed Alkhayyat. "Clustering Document Based Semantic Similarity System Using TFIDF and K-Mean." In 2021 International Conference on Advanced Computer Applications (ACA), 28–33. Maysan, Iraq: IEEE, 2021. https://doi.org/10.1109/ACA52198.2021.9626822.
- "Internet Archive: Digital Library of Free & Borrowable Texts, Movies, Music & Wayback Machine." Accessed April 25, 2025. https://archive.org/details/usenet.
- Nguyen, Ha Dung, Thi-Hoang Anh Nguyen, and Thanh Binh Nguyen. "A Proposed Large Language Model-Based Smart Search for Archive System." arXiv, January 13, 2025. https://doi.org/10.48550/arXiv.2501.07024.
- Paolillo, J.C. "Visualizing Usenet: A Factor-Analytic Approach." In *Proceedings of the 33rd Annual Hawaii International Conference on System Sciences*, 10 pp.-, 2000. https://doi.org/10.1109/HICSS.2000.926716.
- Sack, Warren. "Conversation Map: A Content-Based Usenet Newsgroup Browser." In *Proceedings of the 5th International Conference on Intelligent User Interfaces*, 233–40. New Orleans Louisiana USA: ACM, 2000. https://doi.org/10.1145/325737.325856.
- "UsenetArchives.Com." Accessed April 25, 2025. https://usenetarchives.com/.
- Wang, Mari. "NewsView: A Recommender System for Usenet Based on FAST Data Search," 2004. https://www.duo.uio.no/handle/10852/9103.