

# TEAM READGOOD

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*AI Genomics hackathon*  
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*San Francisco, CA*

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These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.



# PURPOSE

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- The purpose is to provide NF2 patients like Onno with a wide variety of treatment options.
- Specifically, we are looking for treatment options that could potentially help slow or stop tumor growth rather than just deal with the side effects of NF2.



SURGERY



RADIATION



HORMONE  
THERAPY



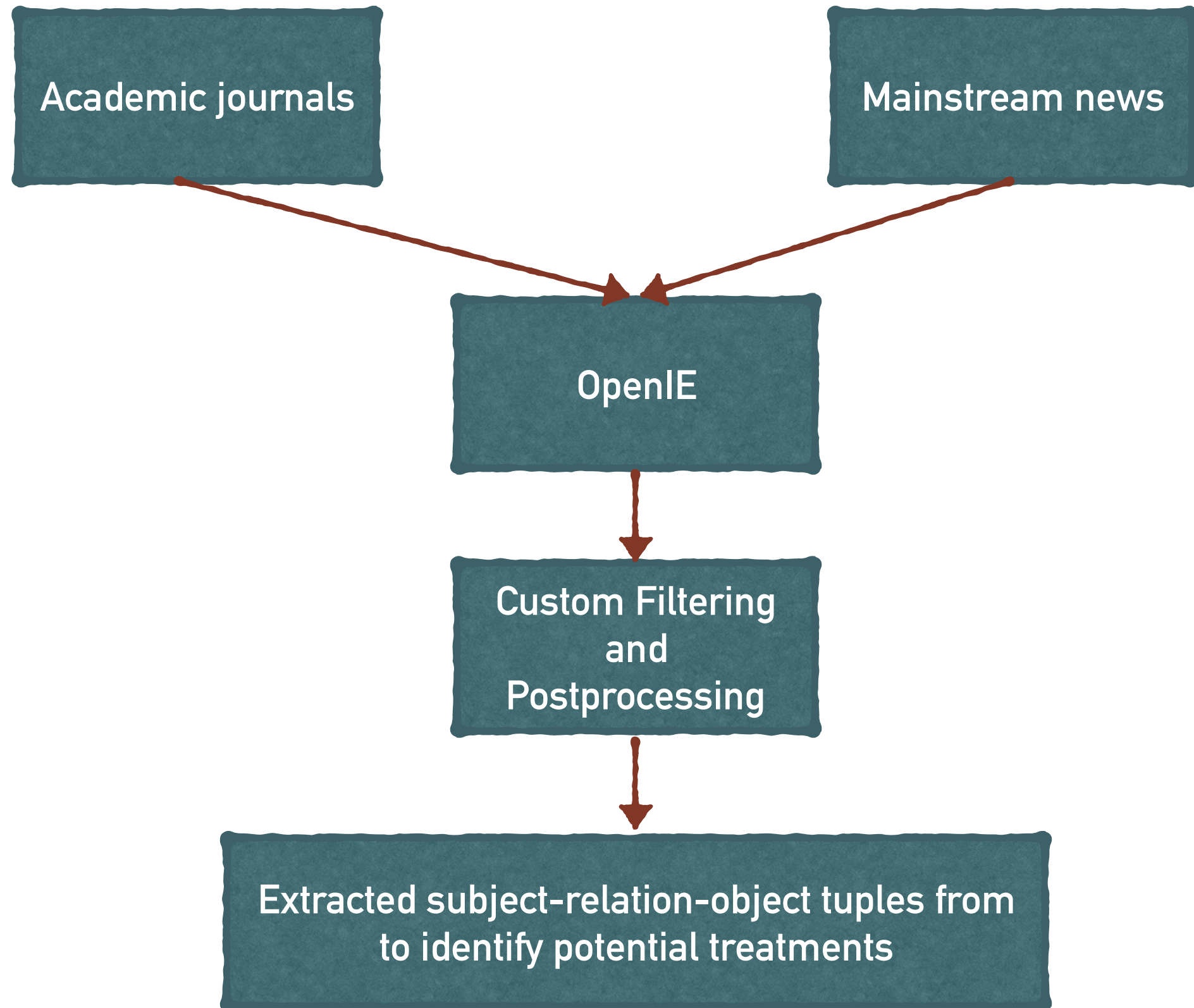
CHEMO-  
THERAPY



TARGETED  
THERAPY

# APPROACH

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# METHODS/ALGORITHMS/MODELS




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- Data sourcing (IrisAI, EDirectCookbook, web crawling w/ Google).
- Data cleansing/transformation (conversion to plain text).
- Application of OpenIE algorithms, which extract relation triples (subject-relation-object of relation), with additional file pipeline, filtering, and file writing modifications.
- Topic modeling using Gensym and Latent Dirichlet Allocation.
- Selection of top candidates: human filters.

*http://bit.ly/ReadGood\_results*

251 lines (250 sloc) | 23.1 KB

RawBlameHistory





Schwanno

1	Subject	Relation	Object	Evidence
2	Human schwannoma	treat with Ponatinib	decreases viability of merlin-deficient HSC and vestibular schwannoma (VS) cells	https://www.ncbi.nlm.nih.
11	human schwannoma cell	treat with	src inhibitor su6656	28427224.txt
12	schwannoma cell	treat with	src inhibitor su6656	28427224.txt
26	vegf antibody bevacizumab	shrink	schwannoma	28620005.txt
32	akt dephosphorylation	decrease	schwannoma cell proliferation	324af9b1b846484b990c
33	akt dephosphorylation	decrease	schwannoma growth	324af9b1b846484b990c

# RESULTS

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*Searchable database of conditions, treatments, results, and evidence*

# FUTURE CONSIDERATIONS

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- Human-in-the-loop verification of results
- Weighting triples by citation or some other factor
- More robust filtering
- Wider data sourcing
- More clinically-oriented NLP engine (Nuance CLU) that allows for better entity recognition, POS-tagging, etc.
- Individual tailoring of treatments, side effects, etc...



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