

HARRISON PIELKE-LOMBARDO

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To ThorTech hiring team,

Certainly, healthcare is one of the most impactful industries and improves nearly every life on the planet. But it's hard to say I love healthcare. When you've had loved ones go through the healthcare system and you see how long it takes to get adequate treatment and properly diagnosed, I can't help but think it could be so much better.

Making healthcare and medicine better is why I've devoted my life to studying computational biomedical systems. As a PhD researcher in a biomedical artificial intelligence laboratory, I've developed systems written exclusively in Clojure to reason about large knowledge graphs of biological mechanisms. This required knowledge of drug-disease pathways as well as computer systems knowledge and algorithm design to handle the large amount of information and computations involved. In addition, I've built Clojurescript Re-Frame/React-based interactive frontends to visualize and communicate my results with other researchers.

I have also worked on two major natural language processing projects. The first was a relation extraction approach for identifying drug-target relations from biomedical journal articles. For my second project, I deployed a text annotation tool, called Knowtator, for developing manually annotated corpora. I released several user-informed feature-releases and it has been used to create the CRAFT corpus which itself is the foundation of several natural language models.

Below are listed a relevant selection of tools, packages, and concepts which I have experience using or have implemented in my own projects.

- Clojure, Clojurescript, Re-Frame, Reagent, Spec
- Python, Tensorflow, Pandas, Numpy, Scikit-Learn
- Java, Swing
- Docker
- Data visualization, graph/network interaction
- Technical communication, API documentation, non-technical explanation,
- Inter-disciplinary communication
- Git, GitHub, CI/CD
- AWS
- Algorithm development
- Domain-modeling
- FAIR data principles, Test-Driven-Development
- Artificial intelligence, machine learning, statistics model optimization/evaluation
- SQL, SPARQL, RDF, Neo4j, Datomic, Datascript

I've come to love writing in clojure, and believe my biomedical experience makes me a strong candidate for ThorTech and its client(s). Hopefully this letter and my resume demonstrate that working with me would be an equally great opportunity for you. I look forward to getting to know ThorTech and the client I would be working with. I have references available upon request.

Sincerely,

Harrison Pielke-Lombardo