

Company Background:

AI Arrive is an artificial intelligence company with the vision to create AI products that accelerate research and enhance our understanding of human disease. AI Arrive partners with pharmaceutical clients to greatly accelerate R&D and drug development efforts by helping clients to make go/no-go decisions, prioritize drug targets, and uncover the mechanism of action (MoA) for drug targets. *DiseaseScribe* enables researchers to visualize biomedical literature and drill-down on the details of specific studies. Although millions of biomedical journal articles are published each year tools to synthesize biomedical literature are needed.

Team Size: 4-5 Students

Location: Remote, client/team meetings will be held with Zoom.

Project Summary: AI Arrive would like to develop a feature of *Disease Scribe*, *BiomedicalPathway-Publication* mapper using KEGG (<https://www.genome.jp/kegg/>), network visualization tools and LLM agents. The end goals would be to provide 1) biomedical pathway visualized as a network (sigma.js and Gephi) such that an end-user could drill down on the edges of the pathway to understand the evidence, biological experiments, and publications that support the connection of two nodes (nodes may be proteins, genes, diseases, etc.) in the pathway, 2) upload a publication and map it to the existing network. LLM agents would then be used to extract relevant experimental information from the publication and summarize the information in a score-card. This will be a tool that could help researchers better understand biomedical literature and cancer biology.

Key Skills/Technologies: A background in NLP, AI/ML, LLM agents, network visualization tools (sigma.js and Gephi), frontend (Vue.js) and backend (Firebase) would be beneficial for this project. The team can seek guidance from the client.

Student Benefits:

- Freedom to develop a creative solution to the problem.
- Future paid internship opportunities
- Build leadership skills by seeing the project through to completion.
- Opportunity to work on a project that is high impact and can make a difference

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