



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. *Experiment2Pathway* is an advanced AI literature and biological data search engine; designed to piece together new biomedical literature to generate new biological pathway ‘hypothesis’.

Team Size: 4-5 Students

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

Project Summary: AI Arrive would like to develop a cancer patient-specific and group specific gene networks using open source Broad Institute TCGA GDAC Firehose multi-omics cancer data and GEO datasets. The goal would be to identify individual demographic and ethnicity data and create an ETL pipeline using NiFi into a graph database. The next goal would be to build out a patient-specific and group specific gene network using Neo4j graph database and to containerize the module as a microservice in Docker. Another goal would be to develop out visuals using d3.js and/or other visualization tools to show the networks. All IP rights will be retained by AI Arrive.

Key Skills/Technologies: A background in developing ETL pipelines, network analysis, working with databases and visualizations w/ d3.js would be beneficial for tackling 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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