

**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. *JournalTypeClassification* is a machine learning based project to determine the type of experiments that were performed in journal articles. Although millions of biomedical journal articles are published each year tools to analyze and interpret those articles are in a state of infancy.

JournalTypeClassification can determine what types of experiments were performed in a journal article.

Team Size: 4-5 Students

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

Project Summary: AI Arrive would like to develop a beta *JournalTypeClassification* solution using biomedical journal articles. The end goal would be to provide a summary output that explains the experiments which were performed in a journal article. The first step would be to prepare a training dataset with images of experimental results and the corresponding labels. The client will provide a set of labeled training data and also provide instruction for creating additional labeled data. The next step would be to build an image detection algorithm that can predict the type of experiment from the image. The next step would be to extract caption text from the figure. The next step would be to extract the image class label from the caption. The next step would be to train a classifier from caption data. The final step would be to create an ensemble classifier that uses both the image detection classifier and the caption detection classifier and output a final experiment type. All IP rights will be retained by AI Arrive.

Key Skills/Technologies: A background in developing ETL pipelines, NLP, image detection classifier, ML model development, working with databases 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

Contact Information:

- Dr. Michelle Archuleta, Founder & CEO AI Arrive: marchu0399@gmail.com
(303-218-8507)