**AYR Inc.: Machine Learning Engineer Take Home Project**

**Project Objective**: Your task for this take-home project is to create a **Font Classifier**. Your classifier should take a single image as input and return the name (or label) of the font used in the image from a predefined list of 10 fonts.

**Fonts to Classify**: You are required to develop a model that can classify the following fonts:

1. Aguafina Script
2. Alex Brush
3. Allura
4. Alsscrp
5. Canterbury
6. Great Vibes
7. Holligate Signature
8. I Love Glitter
9. James Fajardo
10. Open Sans

**Data Collection and Preparation**:

* The **data** folder contains example images of the crops that you will be expected to classify. You may use any method for data collection and preparation. Feel free to use the provided data or generate your own data. However, the final data used for training and evaluation must be well-documented.
* The **fonts** folder contains the **.ttf** files for the fonts used in this project. Feel free to use the .ttf files to generate more font images, and please document your process.

**Project Requirements**:

* **Model Development**: You can choose any machine learning technique to develop your classifier. You can train your model from scratch or use pre-trained models as a starting point.
* **Evaluation Metrics**: Choose appropriate metrics to evaluate the performance of your classifier. Ensure these metrics align with the objectives of font classification. Please provide a rationale for your choice of metrics.
* **Code and Documentation**: Provide all source code and documentation necessary to reproduce your results. This includes data preparation scripts, model training code, and model evaluation scripts.
* **Submission**: Push your project to a GitHub repository and share the repo link with us. Include a README file with detailed instructions on how to set up and run your project. If applicable, include an IPython notebook (**.ipynb**) to demonstrate your data wrangling, model training, and/or classification methods.
* **Model Weights**: If you submit the model weights, ensure they are well-documented, and provide instructions on how to load and use them for evaluation.

**Evaluation**:

* Your model will be tested on a held-out evaluation set. The evaluation set is not available to you, but it will contain images generated using the fonts in the **fonts** folder.
* We expect you to demonstrate your classifier during the interview process, explain your approach, and provide the rationale for all aspects of your project design.