Team name

- Agile

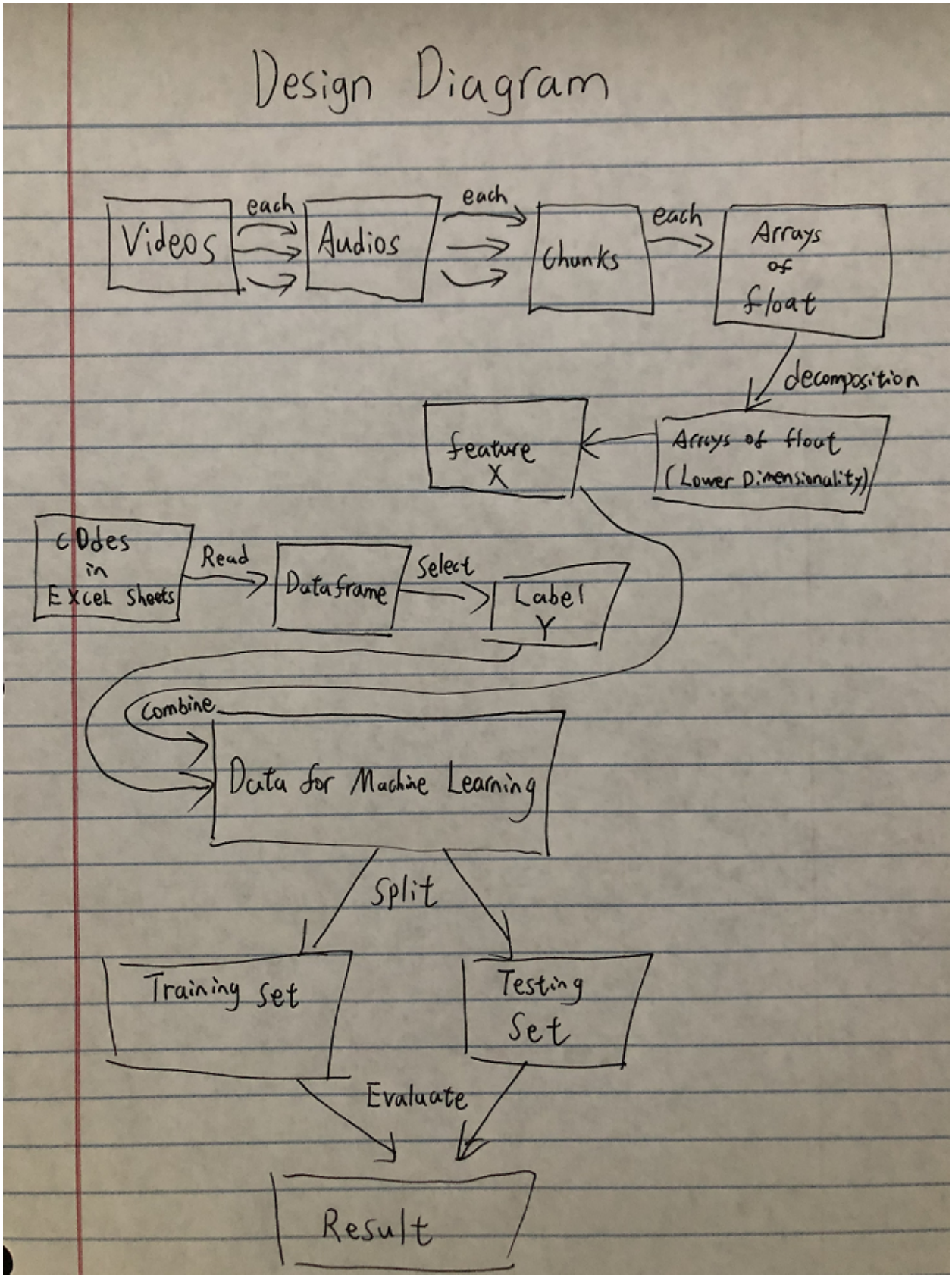
Team roles

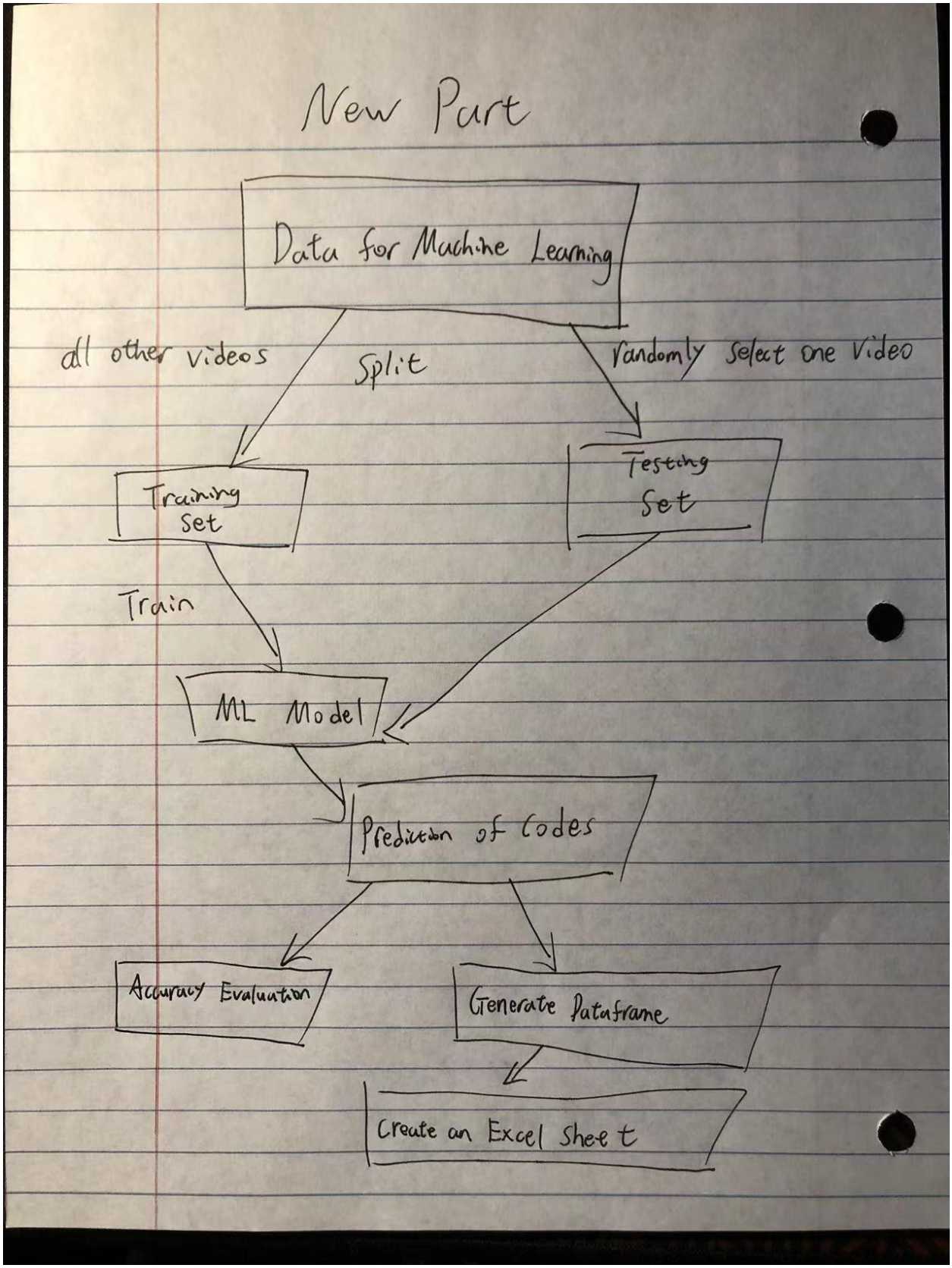
- Pei Chen: Developer
- Jin Huang: Developer
- Yuanyuan Lei: Product Owner
- Dongqing Yang: Developer
- Han Zhang: Developer
- Rongruo Zhou: Scrum Master

Customer meeting date/time/place

- First Meeting: 10/23/2021, Saturday, 10:00 am, Zoom
- Weekly regular meeting: every Wednesday (Start on Oct.27), 11 am – 12 pm, Zoom with Cindy, Guerrero, and her group members.
- Weekly regular meeting: every Wednesday (Start on Nov.3), 5 pm - 6 pm, Zoom with Dr. Irby for updates and clarifications
- Second Meeting: 10/21/2021, Wednesday, 11:00 am, Zoom
- Third Meeting: 11/10/2021, Wednesday, 11:00 am, Zoom
- Fourth Meeting: 11/17/2021, Wednesday, 11:00 am, Zoom
- Fifth Meeting: 11/24/2021, Wednesday,11:00 am, Zoom
- Sixth Meeting: 12/1/2021, Wednesday,11:00 am, Zoom

Design Diagram


Design Diagram
Videos
each
Audios
each
Chunks
each
Arrays of float
decomposition
Arrays of float (Lower Dimensionality)
feature X
codes in Excel sheets
Read
Dataframe
Select
Label Y
Combine
Data for Machine Learning
Split
Training set
Testing Set
Evaluate
Result


New Part
Data for Machine Learning
all other videos
Split
randomly select one video
Training Set
Testing Set
Train
ML Model
Prediction of codes
Accuracy Evaluation
Generate Dataframe
Create an Excel Sheet

Customer Feedback

- The customer proposed that our work could be written as a research paper. We discussed the content and structure of the article, also the related journals together. Finally reached an agreement, hoping to put our cooperation into a publication.
- But as mentioned by the customer, the research paper is a bonus part for our group members. So it's not part of the project requirements. And we plan to mainly work on it after the end of this semester. The requirements for our project are currently complete already.

User Stories Finished

- Modify the method to split the training, validation, and testing data. Since more data was received. Students who are responsible for the data preprocess combined the dataset. This time, they used one video as the validation data and one video as the testing data, and all other videos as training data. According to the model requirement, they processed the data from video to audio, then to uniform format as 20s chunks.
- For the feature extraction, the two students made some research about MFCC and tried it on our dataset. Set possible hypo-parameters and see the feature matrix.
- For the new model LSTM. We studied the possibility on the dataset. We wrote the code and tuned the hypo-parameter to generate the predictions.
- Overall, the performance improved a lot from accuracy of around 40% to about 80%. The customers were very pleased about our result, they recognized our

work and expressed their appreciation to us. At the same time, we discussed our next work, which is the publication.

- Overall, our program is now able to use the customer-provided data and generate result sheets as requested.

GitHub

- https://github.com/oniremilia/ILOI

Slack

- https://join.slack.com/t/csce606iloi/shared_invite/zt-xglog0ed-F8eRaqVaKMo0KheFO8DD5A

Custom Grading Request

- Since the ILOI project is a pure machine learning, or natural language processing project. We do not have any requirements from the customers to do the web stuff. The customers are looking for locally running machine learning modules that can generate result forms as desired.
- Hence, we can not deploy to Heroku. But the code can run as described before locally, and each of the user stories can be tested using data similar to the data we're using. Also, tests like RSpec or Cucumber are not doable.
- Our current code is already finished and completes all the requirements asked by the customer. We have sent the customer feedback sheet to our customers. And we are now waiting for them to check the survey and respond.