

The Github commits are not representative of the work division within our team. Please refer to the time log below for a detailed contribution record.

Date	Contributor(s)	Task	Details of Task
11/09	All	General meeting	Define tasks: <ul style="list-style-type: none"> <li>- Data collection</li> <li>- Data processing/augmentation</li> <li>- Baseline</li> <li>- Initial model research</li> </ul>
11/09	Elisa, Arnaud	Start data collection	<ul style="list-style-type: none"> <li>- Download Kaggle dataset (manually sort)</li> <li>- Collect strawberry (unripe, ripe, rotten)</li> <li>- Collect raspberry (unripe, ripe, rotten)</li> </ul>
11/09	Mark	Baseline script	<ul style="list-style-type: none"> <li>- Created Baseline Script for Assignment 4 images</li> </ul>
11/10	All	General meeting	Update and redefining tasks: <ul style="list-style-type: none"> <li>- Continue data collection/processing, baseline</li> <li>- Transfer learning research</li> </ul>
11/10	Elisa, Arnaud	Continue data collection	<ul style="list-style-type: none"> <li>- Unripe, ripe, rotten (apple, orange, banana), varied background</li> </ul>
11/10	Mark	Baseline on our data	<ul style="list-style-type: none"> <li>- Created quick baseline script for large amount of data</li> </ul>
11/10	Arnaud	Data visualization and balancing script	<ul style="list-style-type: none"> <li>- Data visualization and Data science</li> <li>- Data_Science_For_Frinn.ipynb</li> </ul>
11/11	Elisa	Data augmentation script	<ul style="list-style-type: none"> <li>- Applied nine transforms</li> <li>- data_augmentation.ipynb</li> </ul>
11/12	Arnaud	First training loop model script	<ul style="list-style-type: none"> <li>- First script for training loop end to end</li> <li>- multi_head_CNN_rough_work.ipynb</li> </ul>
11/14	All	Custom data loader, Relabeller, Data normalization	<ul style="list-style-type: none"> <li>- Create custom data loader</li> <li>- Mean and Std normalization</li> <li>- Splitting/Relabeller function</li> </ul>
11/15	All	Custom data loader, Relabeller, Data normalization	<ul style="list-style-type: none"> <li>- Create custom data loader</li> <li>- Mean and Std normalization</li> <li>- Splitting/Relabeller function</li> </ul>
11/15	Elisa	Transfer learning notebook for no additional conv layer	<ul style="list-style-type: none"> <li>- Researched transfer learning, trained and implemented without additional convolution layer</li> </ul>
11/15	Mark	Transfer learning notebook	<ul style="list-style-type: none"> <li>- Researched transfer learning with added</li> </ul>

		for additional conv layer	convolution layer and multi head implementation with transfer learning
11/15	Arnaud	Multi head CNN notebook no transfer learning	<ul style="list-style-type: none"> <li>- Finished and implemented multi-head CNN notebook</li> <li>- <code>multihead_cnn_final.ipynb</code></li> </ul>
11/16-17	All	Overfitting the three models	<ul style="list-style-type: none"> <li>- Each person overfit their respective models on a subset of 150 fruit images</li> </ul>
11/18	All	Redoing Dataloader and label splitting process	<ul style="list-style-type: none"> <li>- Resolving errors with custom data loader and relabeller</li> </ul>
11/19-24	All	Training and Hyper parameter tuning/search	<ul style="list-style-type: none"> <li>- Random Hyper-parameter searching on all 3 models</li> </ul>
11/24-25	Mark	Confusion Matrices, Sensitivity, Recall, Error analysis	<ul style="list-style-type: none"> <li>- Used scikitlearn and seaborn to create confusion matrices, sensitivity, recall, and error analysis</li> </ul>
11/25	Elisa	Collect Specialized Test sets, Set up MSEloss	<ul style="list-style-type: none"> <li>- Implementing MSE loss instead of cross entropy and collecting specialized test sets</li> </ul>
11/25	Mark	Learning rate decay	<ul style="list-style-type: none"> <li>- Used Pytorch reduce on plateau to implement learning rate decay</li> </ul>
11/25	Arnaud	Early stopping	<ul style="list-style-type: none"> <li>- Researched early stopping and implemented early stopping using github repo found online</li> </ul>
11/25-28	All	Final Hyper parameter tuning/search	<ul style="list-style-type: none"> <li>- Hyperparameter searching including MSE Loss, Learning rate decay and early stopping</li> </ul>
11/28	All	General meeting	<ul style="list-style-type: none"> <li>- Settled on transfer learning with convolution layers as best model</li> <li>- Divided tasks for final presentation and report</li> </ul>