

# Random Brain

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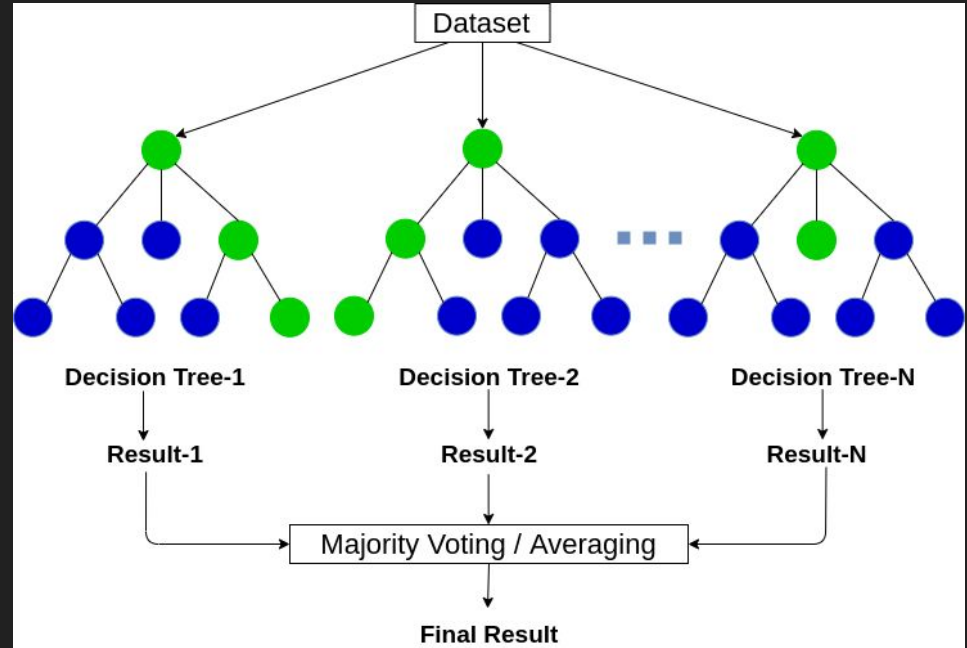
<https://github.com/einelson/Random-brain>

# What is a Random Brain

The Random Brain is fashioned after a random forest.

Attributes of random forest:

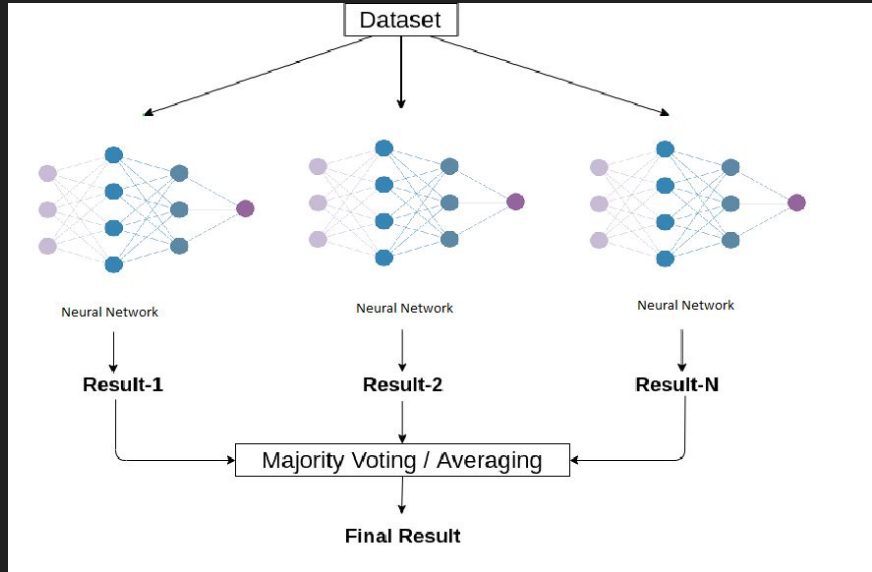
- Vote based predictions
- Majority votes the final prediction
- Combines strengths of many models



# Random Brain details

Attributes:

- Vote based prediction
- Majority votes
- Combines strengths of many models
- Composed of user specified neural networks



# Results

Models imported were named after accuracy of model. Notice how accuracy ranges from 93.5 - 96.5.

After importing these models and running through the Random Brain votes were generated. Votes were averaged together and then classified.

The model produced 100% accuracy using 10 neural network models with below an average accuracy score around 95%.

```
≡ 93.55807900428772_run_2020_08_28-10_02_49.h5
≡ 94.4258987903595_run_2020_08_28-19_21_02.h5
≡ 95.5273687839508_run_2020_08_28-10_03_46.h5
≡ 95.26034593582153_run_2020_08_28-09_41_17.h5
≡ 95.32710313796997_run_2020_08_28-09_56_12.h5
≡ 95.99465727806091_run_2020_08_28-09_43_58.h5
≡ 95.99465727806091_run_2020_08_28-09_59_59.h5
≡ 96.26168012619019_run_2020_08_28-19_31_00.h5
≡ 96.52870297431946_run_2020_08_28-09_46_59.h5
≡ eeg_eye_state.h5
```

	precision	recall	f1-score	support
0	1.00	1.00	1.00	842
1	1.00	1.00	1.00	656
micro avg	1.00	1.00	1.00	1498
macro avg	1.00	1.00	1.00	1498
weighted avg	1.00	1.00	1.00	1498
samples avg	1.00	1.00	1.00	1498

# Future of Random Brain

- Ability to save brain models
- Ability to load brain models
- Ability to return classification answers instead of votes
- Ability to return regression answers instead of votes

