

Model documentation and write-up

Information included in this section may be shared publicly with challenge results. You can respond to these questions in an e-mail or as an attached file. Please number your responses.

1. Who are you (mini-bio) and what do you do professionally?

If you are on a team, please complete this block for each member of the team.

I hold BS in Mechanical Engineering, and PhD in Mathematics. Whatever I like, and I often like competing on challenge platforms like Herox, Innocentive, and now DrivenData.

2. What motivated you to compete in this challenge?

I like the sense of having competition, I like winning awards and I enjoy solving challenges.

3. High level summary of your approach: what did you do and why?

Move the problem to another dimension (transform 1D sequence in to 2D image), exploit new relations (statistics, feature extraction...etc.).

4. Copy and paste the 3 most impactful parts of your code and explain what each does and how it helped your model.

Nothing special here. Define network, test, optimize.

5. Please provide the machine specs and time you used to run your model.

- CPU (model): i7-8700CPU @3.2GHz
- GPU (model or N/A): 1080 TI
- Memory (GB): 32 GB
- OS: W10
- Train duration: I don't remember
- Inference duration: I don't remember

6. What are some other things you tried that didn't necessarily make it into the final workflow (quick overview)?

Using signal statistics on sequences as features for training, all sorts of this.

7. Did you use any tools for data preparation or exploratory data analysis that aren't listed in your code submission?

No.

8. How did you evaluate performance of the model other than the provided metric, if at all?

No. Just TOP-1 and TOP-10 accuracy.

9. Anything we should watch out for or be aware of in using your model (e.g. code quirks, memory requirements, numerical stability issues, etc.)?

Feature extraction is kind of slow (but Python is generally slow, I wish I could do this better).

10. Do you have any useful charts, graphs, or visualizations from the process?

NO. I delete everything, including data.

11. If you were to continue working on this problem for the next year, what methods or techniques might you try in order to build on your work so far? Are there other fields or features you felt would have been very helpful to have?
I would pay more attention to neural network interpretability techniques.