

[F23] PracticalMLandDL

Project Intermediate Report #2

1. **Roman Makarov**
o.makarov@innopolis.university
 2. **Adela Krylova**
a.krylova@innopolis.university
-

Topic: ~~Real or Not? NLP with Disaster Tweets~~
Generating Disaster Tweets using GANs

GitHub: https://github.com/rmakarovv/pmldl_project

Collab:

[Training GPT-2 for Disaster Tweets generation](#)

[Training BERT for Disaster Tweets recognition](#)

Intermediate progress:

- We revised GAN techniques
 - We fine-tuned a Gpt-2 for generating disaster tweets
 - We fine-tuned Bert for classification of disaster tweets
 - We run Bert for classifying disaster tweets generated by Gpt-2
-

Preliminary results:

- Our fine-tuned Bert performed 82.5% accuracy on test data
 - Fine-tuned Gpt-2 generated disaster tweets, some of which are almost like real ones. Sometimes he generates good tweets but not about disasters.
 - Fine-tuned Gpt-2 managed to blame Bert on some of the tweets, but most of the generated texts still do not have much sense
-

Tasks distribution:

So far, Adel worked on fine-tuning Gpt-2. Roman fine-tuned Bert.

Why GANs

GANs can generate more diverse and creative texts, as they do not rely on a predefined vocabulary or a fixed distribution of words.

Plans for next weeks

We plan to use a fine-tuned BERT as a discriminator and fine-tune/train generator model by ourselves. During next week we will try to improve the performance of both - Bert and GPT and also to try to swap the roles of our models - to use Bert for generating tweets and GPT for classification.

Examples of generated tweets by our fine-tuned GPT-2:

The Best Moments After Hiroshima: The Great Con Game

It all started when a young Japanese man named Kenji Higashikawa escaped captivity at Amatsu... via YouTube

Photos: The Sex Workers Forced To Be Hunted The World Over [Bert: Real Tweet]

Obama Declares Disaster for Typhoon-Devastated Saipan [Bert: Real Tweet]

MTV crews on motorcycles hooting and a truck in a tree fall off a cliff...??

So you feel guilty when you don't get by because you didn't give your all? [Bert: Fake Tweet]

A dog attack dog attack that injured a school bus last month has been caught on tape. FOXNewYork

Accident fatality rate ratio ratio ratio bicyclist fatalities percent 'He is so fast.' I asked what he wa [Bert: Fake Tweet]
