Domain Adaptation

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¹BS17B025

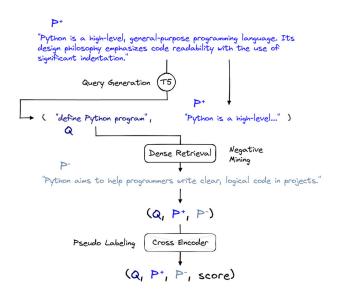
February 9, 2023



Domain adaptation

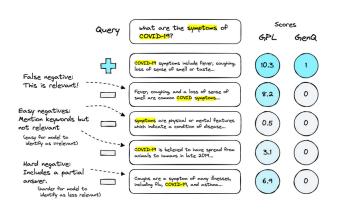
- Finetuning a pretrained bi-encoder model on a new domain requires labelled datasets, which is often scarce.
- Availability of large amounts of unsupervised and unstructures text can be exploited.

GPL theory

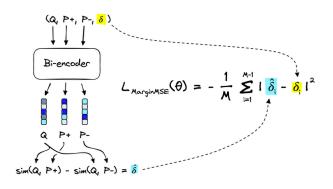


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GPL theory



GPL theory



GPL illustrated

```
Query: How is COVID-19 transmitted
101.72 Corona is transmitted via the air
101.57 Ebola is transmitted via direct contact with blood
100.58 HIV is transmitted via sex or sharing needles
Ouery: what is the latest named variant of corona
99.32 people keep drinking corona lager
98.77 the omicron variant of SARS-CoV-2
90.97 COVID-19 is an illness caused by a virus
Ouery: What are the symptoms of COVID-19?
99.37 common Corona symptoms include a high temperature, cough, and fatigue
98.75 common Flu symptoms include a high temperature, aching body, and fatigue
97.51 symptoms are a physical or mental features which indicate a condition of disease
Query: How will most people identify that they have contracted the coronavirus
97.69 after drinking too many bottles of corona beer most people are hungover
97.35 the most common COVID-19 symptoms include a high temperature, cough, and fatigue
93.53 common symptoms of flu include a high temperature, aching, and exhaustion
```

GPL illustrated

```
Query: How is COVID-19 transmitted
98.21 Corona is transmitted via the air
96.15 Ebola is transmitted via direct contact with blood
94.77 HIV is transmitted via sex or sharing needles
Ouery: what is the latest named variant of corona
93.19 the omicron variant of SARS-CoV-2
93.10 people keep drinking corona lager
86.33 COVID-19 is an illness caused by a virus
Query: What are the symptoms of COVID-19?
95.02 common Corona symptoms include a high temperature, cough, and fatigue
94.21 common Flu symptoms include a high temperature, aching body, and fatigue
93.02 symptoms are a physical or mental features which indicate a condition of disease
Query: How will most people identify that they have contracted the coronavirus
91.62 the most common COVID-19 symptoms include a high temperature, cough, and fatigue
91.36 after drinking too many bottles of corona beer most people are hungover
87.99 common symptoms of flu include a high temperature, aching, and exhaustion
```

References

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