Research Resources

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The Literature Search

Great Tools for Lit Searches

IEEE Access

Google Scholar

Read the Citations for Cross Referencing

ArXiv

GitHub

Managing Citations Effectively

I highly recommend using BibTeX when generating LaTex Manuscripts

```
@article{Myer2020,
  year = {2020},
  publisher = {Royal Society of Chemistry ({RSC})},
  author = {Ciara Myer and Leila Abdelrahman and Santanu Banerjee and Ram
B. Khattri and Matthew E. Merritt and Anna K. Junk and Richard K. Lee and
Sanjoy K. Bhattacharya},
  title = {Aqueous humor metabolite profile of pseudoexfoliation glaucoma
is distinctive},
  journal = {Molecular Omics}
}
```

Programming Resources

Programming Resources: IDEs

Programming Resources: Medium Blogs

- These are an underutilized resource!
- They often have walk through tutorials with code snippets
- Make sure to cite the link in your code if you are using snippets

Implementing an NMT with Attention

Here I will briefly go through the steps for implementing an NMT with Attention.

First define encoder and decoder inputs (source/target words). Both are of shape (batch_size, timesteps, vocabulary_size).

```
encoder_inputs = Input(batch_shape=(batch_size, en_timesteps,
en_vsize), name='encoder_inputs')
decoder_inputs = Input(batch_shape=(batch_size, fr_timesteps - 1,
fr_vsize), name='decoder_inputs')
```

Define the encoder (note that `return_sequences=True`)

```
encoder_gru = GRU(hidden_size, return_sequences=True,
return_state=True, name='encoder_gru')
encoder_out, encoder_state = encoder_gru(encoder_inputs)
```

Programming Resources: GitHub

More and more papers are open sourcing
their algorithms and models.

Some particular Repos to consider:

1. TensorFlow Model Garden
2. PyTorch

You want to spend time searching for
associated code that others have worked on
to accelerate your novel ideas.

Programming Resources: StackOverflow

- When you are really stuck on something!
- Copy and paste the error message into StackOverflow to see how others resolved the problem

Programming Resources: Cloud Computing

- This is helpful for when you need to use a lot of compute power

Some of the most popular cloud providers are:

Takeaways

These Tools Equip you to do Better Research

- You should now be aware of the resource landscape available to you when it comes to executing your projects.

- Know what to use to write/execute your code

- Know what to do when you get stuck