



Introduction to Python

by Dr Ivan Ling

Dr Ivan Ling is currently an assistant professor at the University of Southampton Malaysia.

On the 22nd November 2020, Dr Ivan Ling from the IEM eETD delivered his virtual workshop on “Introduction to Python”. The workshop was organized in collaboration with the IEM Southern Branch YES. A total of 12 participants attended the talk.

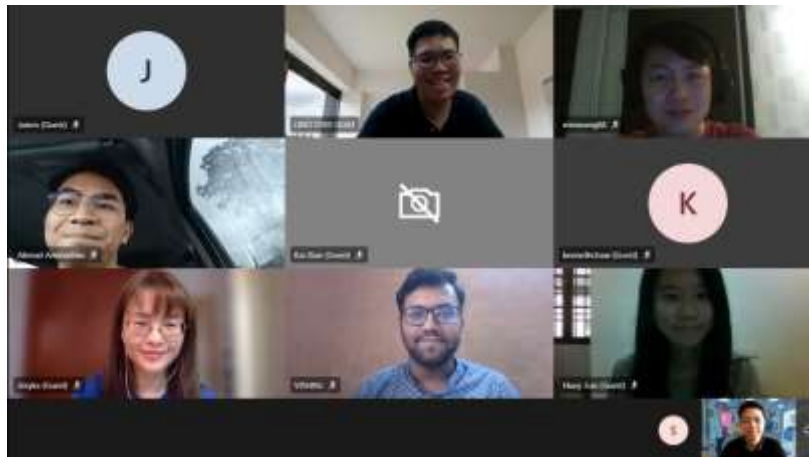


Figure 1: Participants for the Virtual Workshop


The workshop begins with an introduction to Python, and its importance in the 4th industrial revolution (IR 4.0). Dr Ivan highlighted the features in Python, which enables non-programmers to learn quickly and use for data-analysis, automation and machine learning. After that, the audiences are given access to a customized Python notebook hosted on Google Colab to practice. Dr Ivan covered the basic syntax and highlighted the common pitfalls for early learners of the programming language.



Figure 2: Workshop in progress

In Google Colab, the participants are given guidance by Dr Ivan as they work their way through the notes with “live codes”. This means that they are free to edit the codes in the notes, and the codes will compile and run real-time. Thus, giving the participants a deeper insight to understand how Python works. Through the platform, Dr Ivan covered various topics such as:

- Variables and functions
- Data types
- Mathematical and logical operators in Python
- Strings and string manipulation in Python
- User input and output in Python



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IEM-PythonTalk.ipynb
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Common mistakes in strings

1. Mismatched quotes/brackets

[ ] 1 #Try to solve the errors below
    2 print("this code has an error! Oh no!")

This code has an error! Oh no!

[ ] 1 print("this code also has an error! Oh NO!!! HELP!")

This code also has an error! Oh NO!!! HELP!

2. Treating strings as numbers

[ ] 1 #What happens if I run this code?
    2
    3 one_plus_two = '1'+2'
    4
```

Figure 3: Online learning platform hosted on Colab

Overall, the participant enjoyed the sessions. At the end of the workshop, the participants were given access to several free online learning resource to continue their journey in learning. The talk concluded at 7PM, with participants now empowered to learn Python more effectively in their own pace.