

Discovery-based learning  
via  
Participatory Live Coding



# Graduate School

Supporting the Postgraduate student experience



# Imperial College Business School

# Participatory Live Coding

# Participatory Live Coding

# Live Coding

[click here for an example](#)  
(this will open a GIF in your web browser)

# Hello World in Python

- An intuitive, high-level programming language celebrated for its simplicity and readability.
- Python is extensively used in a diverse range of fields such as web development, data analysis, AI, and scientific computing.

Refer to the code snippet on the right for a basic "Hello World" example in Python.

This is often the first program learners write when starting with Python or any new programming language.

```
import sys

def main():
    print("Hello World")

sys.exit(0)
```

Understand the process



“I’ve done that!”

# Finding Bugs

[click here for an example](#)  
(this will open a GIF in your web browser)

# Discovery-based learning

guidance  
\*some assembly required<sup>1</sup>

1. Friesen, S. and Scott, D., 2013. Inquiry-based learning: A review of the research literature. *Alberta Ministry of Education*, 32, pp.1-32.

"Just-in-time [...] models of expert performance for students to emulate"<sup>2</sup>

2. Hmelo-Silver, C.E., Duncan, R.G. and Chinn, C.A., 2007. Scaffolding and achievement in problem-based and inquiry learning: a response to Kirschner, Sweller, and Clark. *Educational psychologist*, 42(2), pp.99-107.



Not without limitations

Where it works best





# The Carpentries<sup>3</sup>

3. <https://carpentries.org/>

# Embrace best practice<sup>4</sup>

4. Nederbragt, A., Harris, R.M., Hill, A.P. and Wilson, G., 2020. Ten quick tips for teaching with participatory live coding. *PLOS Computational Biology*, 16(9), p.e1008090.

Thanks!