From room to Zoom:
Strategies and technologies for teaching Python workshops online

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PyCon Education Summit
May 12, 2021

Outline

- Our workshops

- Going virtual: Technology and workflow

- Attendee and instructor feedback

JHU Data Services: Workshops

Introduction to Python for Absolute Beginners

- First offered in Fall 2019

- Run twice a semester

- 2.5 – 3 hours

- 40-50 attendees (average for webinars)

- Lecture and interactive coding

Workshops since March 2020
Python: 4
Total: 78

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# JHU Data Services: Workshop Attendees

- Open to all Johns Hopkins University affiliates

- Common affiliations:
  - Staff
  - Graduate Students

- Common schools:
  - Medicine
  - Arts & Sciences
  - Public Health

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In-Person Setup

- Controlled environment

- Provide laptops with required software

- Instructor has two display monitors

- TA's walk around the room

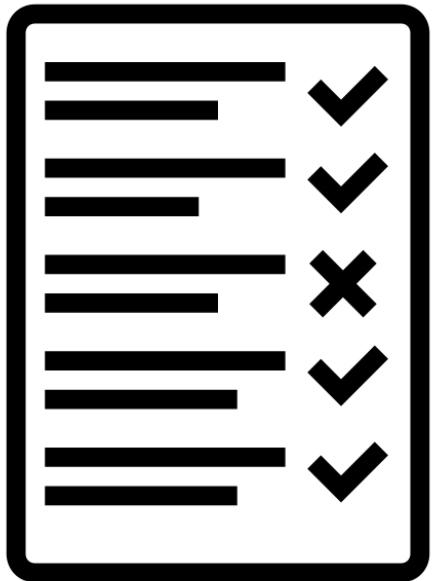# Virtual Setup
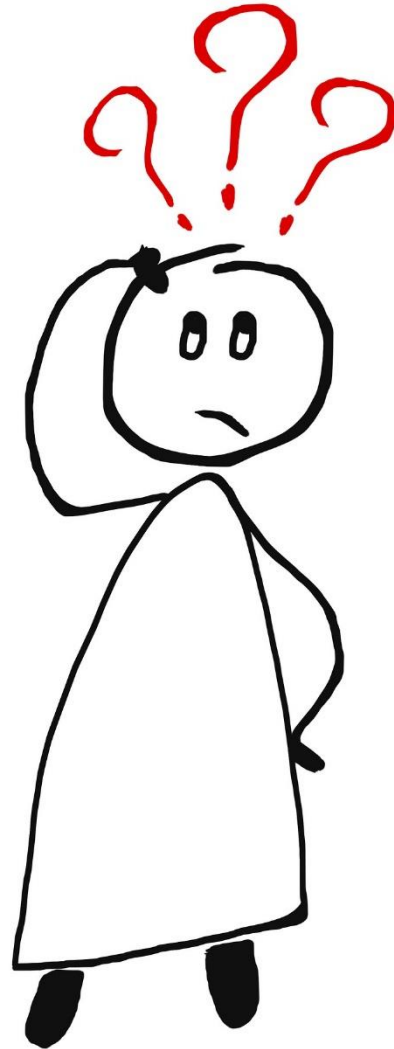
How can we minimize barriers to learning?

Where are our students?

- What **technology** do students have available to them?

- What **skills or knowledge** do students have?

- How much **time** do students have to prepare?

What is the **minimum** technology/knowledge/time our students might have?
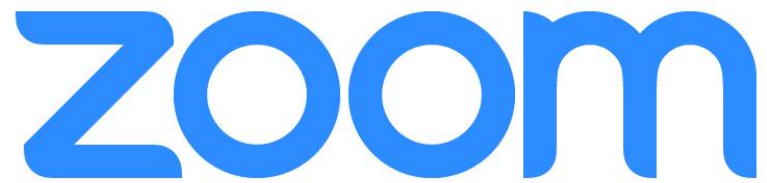
Workflow

Technology

Workflow Adaptations

- Provide materials in advance

- Set expectations with computer setup suggestions

- Varying workshop times

Technology

- **Zoom** for presentation, chat, troubleshooting

- **Poll Everywhere** for additional interaction

- **Replit.com** for live coding

Zoom

- Familiar technology for attendees

- One session; no breakout rooms

- Use chat and breaks for troubleshooting and questions

- 1-2 assistants in every workshop

- Not great for sharing code, but sufficient for introductory class

Poll Everywhere

- Encourages participation

- Anonymous responses

- Question types beyond multiple choice

- Several options for use: computer, tablet, cell phone

Replit.com

- Full-featured, cloud-based IDE

- No downloads required

- Minimizes troubleshooting

- Requires login; offered pythonsandbox.com as alternative
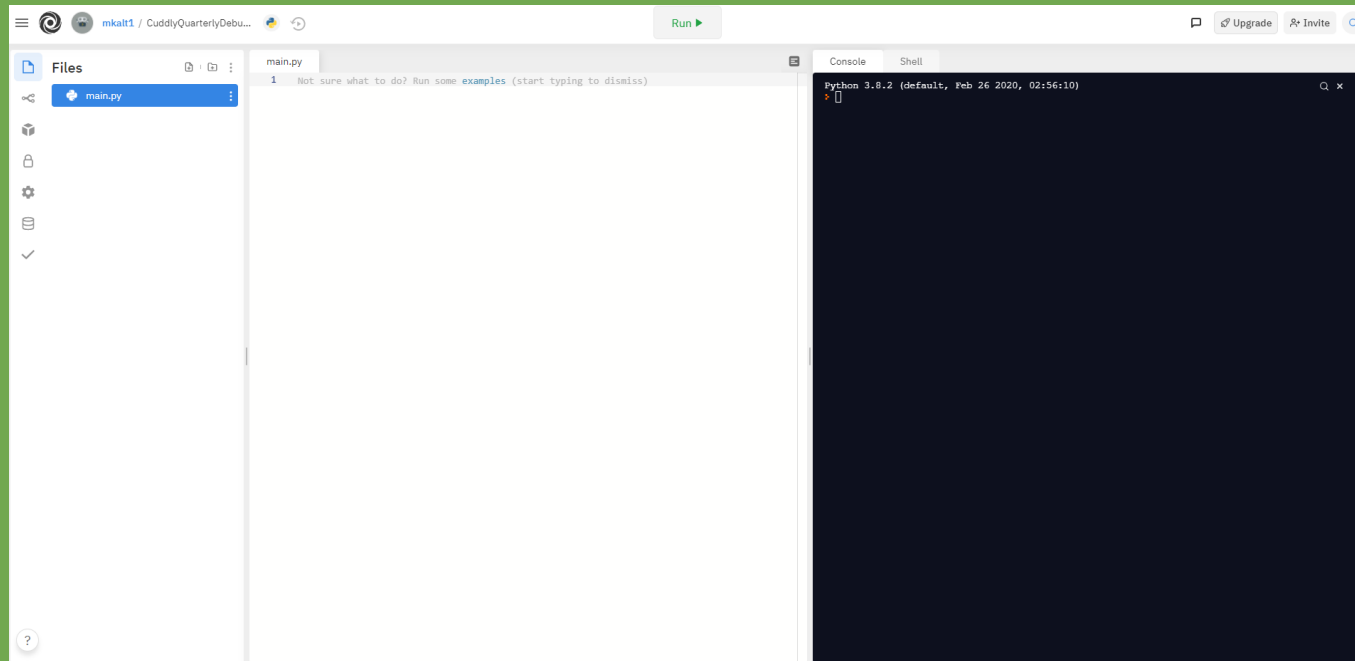
Attendee Feedback

- Most prefer webinar format

- Some liked web-based IDE, some wanted more on IDEs
  - Created IDE overview class on popular IDE features and comparisons

Q5 Would you generally prefer to attend this webinar in-person/in-class or via webinar?
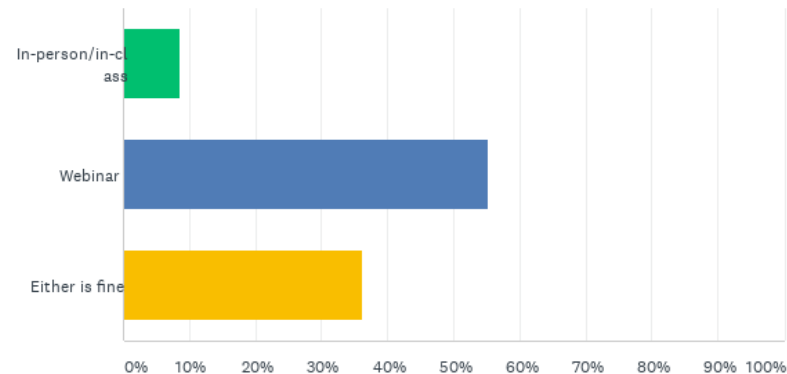
Instructor Feedback

- Plan to continue teaching online

- Larger class sizes, can reach more students

- Webinar interest and demand remains high

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Still working on…

- Zoom fatigue

- Sharing longer, more complicated code

- Accessibility of workshop materials and technology

- Sharing workshop materials – setting up GitHub repos!

Thank you!

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Questions?

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