



INTERMEDIATE STREAMLIT

COURSE OUTLINE: TRAINING FOR DTP

Intermediate Streamlit

Outline: a custom workshop for DTP signals teams

Audience: Analysts at the Department of Transport and Planning who want to learn about creating dashboards based on large datasets.

Prerequisites: Prior completion of Python Charmers' *Introduction to Python* or *Python for Data Analysis* course or equivalent Python experience (6+ months of daily use if self-taught).

Overview: This short course dives into how to get good performance with dashboards based on the *Streamlit* package, with a focus on caching. It also describes the limitations of *Streamlit* and when it is necessary to use a different framework for creating web apps in Python.

Duration: ½ day

Expert instructors: See bios below.

Delivery: Live instructor-led online training with interactive exercises.

Exercises: There will be practical exercises throughout the training course. These will be challenging and fun, and the solutions will be discussed after each exercise and provided as source code. During the exercises, the trainer will offer help and suggestions.

Worked examples: To prepare you for the exercises, the trainer will present worked examples and demos and help you to follow along on your own computer.



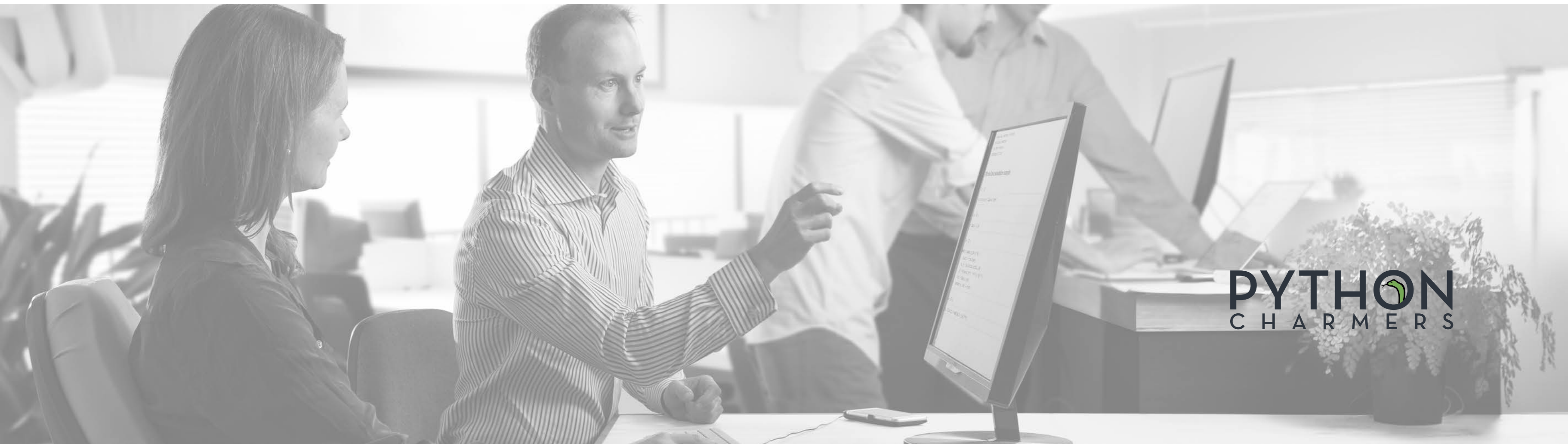
Topic outline

Half-day course

- Architectural overview of *Streamlit* and performance implications
- Caching: memory and disk caching
- Worked examples with large DTP datasets
- Limitations of *Streamlit*; overview of alternatives
- Open workshop: Questions & answers
- [Time permitting]: Session state

Personal help

We are happy to offer on-the-spot problem-solving after each day of the training for you to ask one-on-one questions — whether about the course content and exercises or about specific problems you face in your work and how to solve them. If you would like us to prepare for this in advance, you are welcome to send us background info before the course.



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Other information

Format: Courses are conducted online via video meeting using Python Charmers' cloud notebook server for coding and sharing code with the trainer(s).

Computer:

- **Hardware:** we recommend ≥ 8 GB of RAM and a webcam. Preferably also multiple screens and a quiet room (or headset mic).
- **Software:** a modern browser: Chrome, Firefox, or Safari (not IE or Edge); and WebEx

Timing: Most courses will run from 9:00 to roughly 17:00 (AEST / AEDT) each day, with breaks of 50 minutes for lunch and 20 minutes each for morning and afternoon tea.

Certificate of completion: We will provide you a certificate if you complete the course and successfully answer the majority of the exercise questions.

Materials: You will have access to all the course materials via the cloud server.

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Instructor bio



Dr Edward Schofield

Ed is the founder and managing director of Python Charmers. He has consulted to or trained over 3000 people from dozens of organisations in Python and data science, including Atlassian, Barclays, Cisco, CSIRO, Dolby, Harvard University, IMC, Singtel Optus, Oracle, Shell, Telstra, Toyota, Verizon, and Westpac. He is well-known in the Python community as a former release manager of *SciPy* and the author of the widely used *future* package. In normal times he regularly presents at conferences in data analytics and Python in Australia and internationally.

Ed holds a PhD in machine learning from Imperial College London. He also holds BA and MA (Hons) degrees in mathematics and computer science from Trinity College, University of Cambridge. He has 20+ years of experience in programming, research, teaching, and public speaking.



Instructor bio



Dr Robert Layton

Robert is the author of the book "*Data Mining in Python*", published by Packt in 2016. He provides analysis, consultancy, research and development work to businesses, primarily using Python. Robert has worked with government, financial and security sectors, in both a consultancy and academic role. Before joining Python Charmers, he was also a Research Fellow at the Internet Commerce Security Laboratory, investigating cybercrime analytics and data-mining algorithms for attribution and profiling.

Robert is a contributor to the Python-based *scikit-learn* open source project for machine learning and writes regularly on data mining for a number of outlets. He also authored the website "*LearningTensorFlow.com*" and sold it to DataBricks in 2017. He has presented regularly at a number of international conferences in Python, data analysis, and its applications.





About Python Charmers®

Python Charmers is a leading global provider of training in data science and software development, based in Australia and Singapore. Since 2010, Python Charmers has given over 600 training courses and bootcamps to over 6,000 delighted people from organizations such as AGL, Atlassian, Barclays, CSIRO, Cisco, Deloitte, Dolby, IMC, pwc, Singtel Optus, Shell, Sportsbet, Telstra, Toyota, Verizon, Westpac, and Woolworths. Python Charmers specializes in teaching programming and data science to scientists, engineers, data analysts, quants, and computer scientists.

Python Charmers' trainers boast years of experience with data science, data analytics, statistical modelling, and programming, and deep roots in the open source community, as both speakers at events and contributors to well-known open source projects for data science, including *NumPy*, *SciPy*, *Scikit-Learn*, *Pandas*, *Matplotlib*, *NetworkX*, *Dash*, and *Future*.

Testimonials: Testimonials from past participants of similar bootcamps and training courses are available at

<https://pythoncharmners.com/testimonials/>

Questions: We would be happy to hear from you. Please let us know if you have any questions.

Contact:

Phone: +61 1300 963 160

Email: info@pythoncharmners.com

Web: pythoncharmners.com

The logo for Python Charmers features the word "PYTHON" in a large, bold, sans-serif font. The letter "O" is replaced by a stylized green snake head. Below "PYTHON" is the word "CHARMERS" in a smaller, all-caps, sans-serif font. The background of the entire page is a grayscale image of a laptop keyboard and screen displaying code.

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The logo features the word "PYTHON" in a bold, white, sans-serif font. The letter "O" is replaced by a stylized green Python snake head. Below "PYTHON" is the word "CHARMERS" in a smaller, white, spaced-out sans-serif font, followed by a registered trademark symbol (®).

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