



## PyOhio 2010

### You are Python

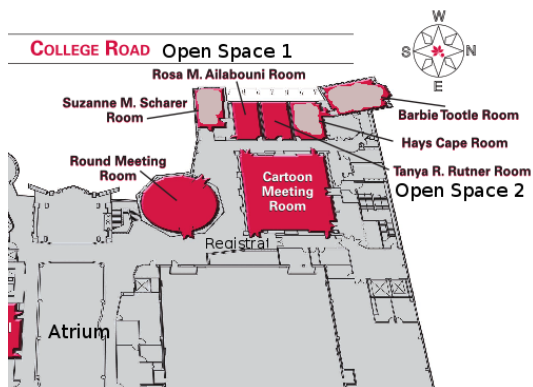
Python is not just a language - it's a community of people sharing code, ideas, knowledge, excitement, and energy to make something we all benefit from and enjoy. PyOhio is not just a series of talks, but a chance to plunge deep into the Python community. Prepare yourself not just to receive information, but to ask questions, answer questions, have great conversations, try things out, and work together.

### You are PyOhio

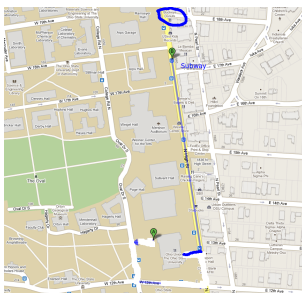
We know, it's tempting to spend the whole weekend going from one talk to the next - we have a great talk lineup. Remember, though, that we're also here for the conversations and encounters that can only happen in person; and, since our talks are being recorded for publication at [python.mirocommunity.org](http://python.mirocommunity.org), you don't need to worry that you'll miss talk content forever if you make another choice. Try the Sprints, and check the Open Space boards *frequently*!

## Notes

## Map



Main PyOhio events take place in the northwest corner of the 3rd floor of the Ohio Union. Monday and Tuesday daytime sprints take place in the Creative Arts room in the OU's Lower Level.



To get to evening sprints, exit the OU onto High Street (you're facing Bento Go Go), turn left, and walk north on High Street until Arps Hall is on your left.

## Food

PyOhio isn't providing lunch, but there are plenty of options on the first floor of the Ohio Union and out the door on High Street. **DON'T EAT ALONE!** Remember, the character who goes off alone always gets eaten by zombies. We're all here to be with other Python lovers, so invite lunch companions fearlessly, especially if you spot somebody with a PyOhio badge and no apparent lunch companions.

If you'd like to join an impromptu group for a trip to a specific restaurant, look for the "Gather here for:" signs on the easels outside the PyOhio talk and open-space rooms.

## Lightning Talks

Saturday and Sunday each end with the Lightning Talks, a rapid-fire succession of five-minute presentations on any topic (serious or not) that you'd like to bring to the Python community. We'll also use the Lightning Talks to distribute swag prizes... must be present to win! If you'd like to give a Lightning Talk, just sign up at the registration desk.

## Open Spaces

Two Open Space rooms (Ailabouni and Rutner) are set aside for attendees to create their own conference content on the fly. Check the Open Space board *frequently* to find out what's going on.

### *What can you do with Open Spaces?*

- Informal, unplanned discussions on a topic
- Cooperative workshops
- Teach-Me learner-driven classes
- Regular-style talks
- Follow-up discussions after scheduled talks
- Something just for fun (board game, card game, sing-a-long...)
- Anything else you can think of...

### *How do I schedule an Open Space?*

Anybody can schedule an Open Space; you don't need anybody's approval. Look for the Open Space board on an easel near the registration desk. Choose an open spot on the grid representing a time slot and room. Take one of the provided index cards, write down a topic and your name, and stick it to the board. Show up and see what happens!

## ***Sounds crazy. Does that actually work?***

It does! People who've tried it generally come quickly to love it. In any case, the Law of Two Feet means that you can try an Open Space event for precisely as long as you are benefiting from it — if you aren't, then you are not just allowed but *obligated* to leave. There's no reason not to try it!

## **Sprints**

Sprints are cooperative workshops where we work together on open-source projects. Sprinters can write new code or documentation, or fix bugs in either. All skill levels can sprint - in fact, working alongside more experienced Pythonistas can be a great way to improve your skills. All PyOhio attendees are invited to the sprints; just show up and introduce yourself. Groups will be sprinting on these topics:

- Python core
- Android Scripting Environment
- Django
- Flask
- Pyjamas

On Saturday and Sunday, sprinters will work from 7 PM to midnight at Subway at 1739 North High Street. (This is the large Subway restaurant fronting directly on High Street a few blocks north of the Ohio Union, *not* the small one on East 13th Ave.) Any sprinters surviving when Subway closes at midnight can move to Buckeye Donuts at 1998 North High Street.

On Monday and Tuesday, sprinters will work from 9 AM to 7 PM in the Creative Arts room in the basement level of the Ohio Union; after 7 PM, they will move to the Subway.

## Local Groups

**Ann Arbor: Michipug**

<http://groups.google.com/group/michipug>

**Cincinnati: CincyPy**

<http://groups.google.com/group/cincypy>

**Cleveland: ClePy**

<http://www.clepy.org/>

**Columbus: Central Ohio Python Users Group**

<http://www.meetup.com/Central-Ohio-Python-Users-Group/>

**Columbus: OSU Open Source Club**

<http://opensource.cse.ohio-state.edu/>

**Dayton: Dynamic Languages Users Group**

<http://www.dma.org/sigs.shtml#Dynamic>

**Grand Rapids: Grand Rapids Python Users Group**

<http://www.grpug.org/>

**Indianapolis: IndyPy**

<http://python.meetup.com/182>

## Other Events

- Sep. 2010: Ohio LinuxFest, Columbus
- Oct. 2010: Central PA Open Source Conference, Harrisburg
- Jan. 2011: CodeMash, Sandusky
- Mar. 2011: PenguiCon, Detroit
- Mar. 2011: PyCon, Atlanta
- GiveCamps in Ann Arbor (September), Miami U. (October), Cleveland (July), Columbus (July)...
- [columbustechevents.com](http://columbustechevents.com), [clevelandtechevents.com](http://clevelandtechevents.com), [daytontechevents.com](http://daytontechevents.com)

## Staff

### **Chair**

Catherine Devlin

### **Vice-Chair**

Eric Floehr

### **Program Committee**

David Stanek, Alex Gaynor, Chris Miller, Mat Kovach, Jay Shaffstall, Mike Crute, Doug Stanley

### **A/V**

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### **Facility Liason**

John Langkals

### **Publicity Chair**

Sarah Dutkiewicz

### **Open-space Coordinator**

Scott McCarty

### **Webmaster**

David Stanek

### **Sprint coordinator**

Nicholas Bastin

## Social Networking

- <http://www.linkedin.com/groups?gid=1895625>
- Twitter: @pyohio and #pyohio
- <http://www.facebook.com/group.php?gid=333853895634>
- Chat: <http://www.meebo.com/room/pyohio/>
- #pyohio on <http://webchat.freenode.net/>

## Garther Snake Sponsor: DMA

The **Dayton Microcomputer Association** (<http://dma.org/>) is one of the country's oldest and most diverse computer users' groups. The DMA meets on the last Tuesday of each month at 7 PM.

The DMA includes many Special Interest Groups (SIGs), including the Dayton Dynamic Languages User Group, which meets the second Wednesday of each month at 7 PM at the Dayton Chess Club.

## Venue Sponsor



**Open Source Club**  
The Ohio State University

The Open Source Club at Ohio State University focuses on building a strong community of open source users and developers in order to bring the benefits of open development, open standards, and free software to the university community, and beyond. OSC is open to all, including non-students. It meets every Thursday during the school year at 7p in Drees Labs 305.

<http://opensource.cse.ohio-state.edu/>

## Swag providers

O'REILLY\*



WearPython

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## Thanks to

We wanted a high-quality Python conference without charge to attendees, so we planned an extensive scheme of identity theft and credit card fraud.

Fortunately, we were saved from a life of crime by the generosity of our sponsors:

- Microsoft
- Intellovations
- AG Interactive
- Dayton Microcomputer Association

The Ohio State University's Open Source Club supplies volunteer labor and campus knowledge, and makes the Ohio Union facilities available to us at extremely low student-group rates.

Lyndsey Greer of the Ohio Union has been very helpful and responsive to our venue needs.

YAPC::NA::2010 staff supplied site advice, swag, and speakers' parking passes.

The Python Software foundation provided seed money for the first PyOhio, continues to provide an expert A/V crew, and acts as PyOhio's parent organization for legal and financial purposes (sparing us the expense and labor of incorporating PyOhio itself). If you'd like to thank the PSF and help them seed more regional conferences like PyOhio, there's a donation bucket at the registration desk.

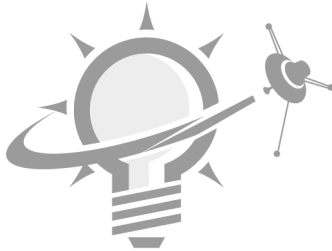
PyOhio is run entirely by volunteers. The main channel for communication between volunteers is the [pyohio-organizers@python.org](mailto:pyohio-organizers@python.org) mailing list - we'd love to have you join the list to provide feedback from this year and to find out how you can help next year.

Finally, thanks to YOU for coming and participating. Tell your friends - we'd love to see them at PyOhio 2011!

Anaconda Sponsor

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AMERICAN GREETINGS

# Talk Descriptions

## Saturday, 10 AM

**ROUND ROOM: *Project Management 101*** (James Bonanno) - Python is employed for a general purpose project management tool. Contrasted to tools like Sphinx which focus on documenting a software project, this framework is intended for general purpose project management, with a specific application into engineering projects. Intermediate uses of Python are employed, as well as the Web.py framework, Sphinx documentation tool and the Mako template system. The author has used this tool to create internal commercial applications of the project management software.  
*Audience: intermediate*

**CARTOON 1: *Micro- optimization strategies for Python*** (Nick Bastin) - As opposed to macro-optimization, which focuses on choosing and designing more optimal algorithms for your problem set, micro-optimization focuses on optimizing the implementation of the algorithms you are already using. We will discuss pros and cons of micro- optimization, common Python patterns which are surprisingly suboptimal, new patterns to ease optimization, and show how to use the profiler and disassembler to identify new opportunities for optimization.

This talk will focus practical examples on the Python 2.x versions, but overall strategies are useful for any version (or any language, for that matter). *Audience: Intermediate*

**CARTOON 2: *Test Driven Learning with Python Koans*** (Greg Malcom) - Bring a laptop or sit with a partner and get some hands on experience with Python combined the chocolaty goodness of Test Driven Development!

The Python Koans are a set of Unit Tests which will not pass until you are sufficiently enlightened. Enlightenment may be achieved by filling in missing values and occasionally performing small feats, such as writing some code to categorize types of triangles. These labs make use of the Python Koans, a recent port of the popular Ruby Koans tutorial. They are fairly similar but also feature content specific to the Python language (such as for learning about decorators and generators). They are also available for both Python 2.6 and Python 3.1, so this is a great way to get caught up on newer language features. And don't worry if can only attend for a short time, you can work at your own

pace! *Audience: beginner/intermediate*

## **Saturday, 11 AM**

ROUND ROOM: *Intro to Core Involvement* (Dan Buch) - You can help to advance CPython into the future! Whether you're able to help with Documentation, bug triage, or would even like to sling some C, your efforts will be greatly appreciated. *Audience: beginner*

CARTOON 1: *Postgresql and Python* (Brent Friedman) - An overview of PostgreSQL and its use with Python. *Audience: beginner*

CARTOON 2: *Test Driven Learning with Python Koans* (continued)

## **Saturday, 1:30 PM**

ROUND ROOM: *Implementation of a Numerical Simulation in Python* (Jeffrey B. Armstrong) - The Python programming language is well suited for numerical computation under a variety of circumstances. Python offers advantages over competing free and commercial technologies, including price, functionality, and maintainability.

Specifically, the combination of mature numerical libraries and liberal licensing allow complex simulations to be coded with ease and to be made available to nearly all interested parties. NumPy/SciPy, database access, networking, and optimization techniques are examined in detail with respect to numerical computation. A practical example involving an aerothermal commercial turbofan aircraft engine simulation showcases these advantages. An aircraft engine is broken down into discrete stages, including compressors, turbines, and other flow-related components. Commonalities between components, such as rotation and the presence of inlet and exit conditions, map cleanly to the object-oriented nature of Python. Based on simulation needs and hardware availability, Python allows for the parallel computation of simulations without the expense and complexity of commercial parallelization packages. *Audience: intermediate*

CARTOON 1: *Genetic Programming in Python* (Eric Floehr) - Did you know you can create and evolve programs that find solutions to problems? This talk walks through how to use Genetic Programming (GP) as a tool to discover solutions to hard

problems, when to use GP, how best to set up the GP environment, and how to interpret the results. *Audience: beginner to intermediate*

**CARTOON 2: *So Many Web Frameworks, So Little Time*** (Gloria W. Jacobs) - A non- biased, non-Django-centric comparison of Python web frameworks and related tools. We'll be generating SVG maps and playing with widgets, discussing efficiency and reviewing caching methods, executing service based examples, and taking an in- depth look at the features and limitations of many major Python web frameworks and tools. We'll see why there are so many frameworks, and instances when you may want to choose one over another. *Audience: intermediate*

## ***Saturday, 2:30 PM***

**ROUND ROOM: *Log Analysis with Python*** (Scott McCarty) - Log analysis is something that every programmer and systems administrator must do sometimes. This talk will be an introduction to the concepts of pattern recognition, artificial ignorance, word counting, stopword lists, and command line graphing. It is based on a pythonic implementation of these techniques called petit and will delve into several use cases and show how using these techniques can help you save time when analyzing logs with python. *Audience: beginner*

**CARTOON 1: *Getting to Know MongoDB Using Python and IronPython*** (Sam Corder) - Is your RDBMS not coping with the load anymore and can't be scaled out any further? Are you designing the next big thing and know your RDBMS won't be able to handle it? Are you tired of shoe-horning a data model into where it doesn't belong? Are you just curious what this thing called MongoDB is? In this session you will explore a popular alternative to the RDBMS called Mongo from one who has battled with BSON to write the original .Net driver. You'll learn basics of schema design, document manipulation, several ways to get at your data, something odd called map/reduce and all from the comfort of Python and the slightly uncomfortable IronPython. *Audience: any*

**CARTOON 2: *So Many Web Frameworks, So Little Time*** (continued)

## **Saturday, 3:30 PM**

**ROUND ROOM: *Teach Me Python Bugfixing*** (Catherine Devlin) - Python wants YOU to help maintain and extend the language we love so much... but maybe you don't know how to go about making your contribution. Catherine doesn't either. David Murray, an experienced Python contributor, will guide her - and you - through the process, live and unscripted. Come take part in learner-controlled instruction. No C programming required!  
*Audience: Intermediate*

**CARTOON 1: *GUI Tools*** (James Bonanno) - There are several Graphical User Interface frameworks available for Python. In this talk, perhaps the two most popular, wxPython and PyQt, are examined. The talk will focus on major differences, tools, and a specific example done both in wxPython and PyQt, that is a non-trivial production grade example. *Audience: Intermediate/Advanced*

**CARTOON 2: *So You Just Took "Python 101" - What's Next?*** (Greg Lindstrom) - In this class we will develop, step-by-step and as a class, two simple games, Hi/Low and Hangman. We will start from scratch and walk through each step of each game discussing decision making, loops ("for", "while" and "if"), data structures (tuple, list and dictionary) and looking at different ways to "get-r-done". You should know a little about Python but don't have to know anything else about programming (you should know how to edit and run a Python program on your Operating System). Bring a computer with Python installed if you want to play along.  
*Audience: beginner*

## ***Saturday, 4:30 PM***

ROUND ROOM: *Python 101 for the .NET Developer* (Sarah Dutkiewicz) - The first part of the session will cover the basics of Python - its history, how its data structures compare to those we're familiar with in the primary .NET languages, its strong and weak points, who's using it, and why you as a developer - both generally speaking and as a .NET developer - should care about Python. The second part of the session will get into the demos - starting with some basic Python scripts and getting into IronPython scripts, if time allows. By the end of this session, you'll have an idea of what Python is, why you should know it as a developer and specifically as a .NET developer, and how to get setup and write a basic app in both Python and IronPython.  
*Audience: Any*

CARTOON 1: *Wrangling the Bits, Standardizing How Apps Get Built* (Rick Harding) - As we moved more work to Python we had to figure out how to start, share, and deploy projects in a standard way. Virtualenv, pip, and Git to the rescue. *Audience: any*

CARTOON 2: *So You Just Took "Python 101" - What's Next?*  
(continued)

## ***Saturday, 5:30 PM***

CARTOON 1+2: *Lightning Talks* - A rapidfire series of five- minute talks from all our attendees.

## ***Saturday, 7 PM***

SUBWAY (1739 N. High Street): *Sprints* - all are welcome!

## ***Sunday, 12:30 PM***

ROUND ROOM: *Building Your Own Kind of Dictionary* (W. Matthew Wilson) - My talk is based on a project that seemed very simple at first. I wanted an object like the regular python dictionary, but with a few small tweaks:

- values for some keys should be restricted to elements of a set
- values for some keys should be restricted to instances of a type



For example, pretend I want a dictionary called favorites, and I want the value for the "color" key to be any instance of my Color class. Meanwhile, for the "movie" key, I want to make sure that the value belongs to my set of movies.

In the talk, I'll walk through how I used tests to validate my different implementations until I came up with a winner.

Unlike my talk last year on metaclass tomfoolery, and the year before that on fun with decorators (and decorator factories) I'm hoping to make this talk straightforward and friendly to beginning programmers.

You'll see:

- how I use tests to solve a real-world problem
- a few little gotchas with the super keyword
- a little about how python works under the hood.

*Audience: novice*

CARTOON 1+2: *Splunking with Python* (Benjamin W. Smith) - Getting dirty with the Splunk API and various other sysadmin tasks with Python. *Audience: Any*

## **Sunday, 1:30 PM**

ROUND ROOM: *Processing Large Datasets with Hadoop and Python* (William McVey) - This talk will explore how Hadoop along with Python can be used to process large datasets. An overview of the Apache Hadoop project will be given. The map/reduce concept will be introduced and some methods of coding the data processing routines in python will be explored. The talk will use real world examples to illustrate how this approach can be used to parallelize computationally expensive operations across multiple cluster nodes effectively using python. The course will assume familiarity with the Python language during the demos, but will not actually require a deep knowledge of python to understand the concepts introduced. *Audience: beginner*

CARTOON 1+2: *Controlling UNIX Processes Using Supervisor* (Calvin Hendryx-Parker) - Supervisor is a Python daemon that can control arbitrary processes in a UNIX-like environment. It features a client/server model of control that can easily be extended. This talk will cover the configuration and setup of Supervisor. It will also cover how to extend Supervisor and take

advantage of its XML-RPC interface and ability to react to events that it generates. *Audience: intermediate*

## ***Sunday, 2:30 PM***

ROUND ROOM: *PyPy and Unladen-Swallow: Making Your Python Fast* (Alex Gaynor) - Python has a reputation for being a bit slow, but it doesn't have to be that way. This talk will cover why Python is slow, and what two of the most exciting virtual machines are doing about it. *Audience: beginner/intermediate*

CARTOON 1+2: *Code with Style* (Clayton Parker) - Six Feet Up's senior developer Clayton Parker will lead you on a journey to become a Python Zen master. Your code should be as fashionable as it is functional. To quote the Zen of Python, "Beautiful is better than ugly". This talk will teach you about the Python style guide and why it is important. The talk will show you examples of well written Python and how to analyze your current code to make Guido proud. *Audience: beginner*

## ***Sunday, 3:30 PM***

ROUND ROOM: *Python and Entrepreneurship* (Eric Floehr) - One of the strengths of dynamic languages is rapid development and quick results. Python has been used by a number of Ohio small businesses, from supporting back-office operations to being the language the company's products are built on. This panel discussion will talk about the opportunities and challenges in using Python to build a business on, as well as a discussion on starting, running, and growing a technology-based business. *Audience: any*

CARTOON 1+2: *Lap Around IronPython* (Sarah Dutkiewicz) - It's not just C# and VB.NET that can be used in WinForms, WPF, Silverlight, and ASP.NET. You could also use IronPython! In this session, you will get a quick overview of IronPython and a look into using it with each of the following: WinForms, WPF, Silverlight, and ASP.NET. *Audience: Intermediate; Basic knowledge of .NET helpful*

## ***Sunday, 4:30 PM***

CARTOON 1+2: *Making It Go Faster* (W. Matthew Wilson) - I'll use cProfile, pstats, and RunSnakeRun to find where code is getting bogged down in a real-world example. I'll measure the run-time cost with timeit, refactor, and measure it again.

Finally, I'll talk about the limits of python optimization and show how to replace python code with C. *Audience: novice*

## ***Sunday, 5:30 PM***

CARTOON 1+2: *Lightning Talks* - A rapidfire series of five- minute talks from all our attendees.

## ***Sunday, 7 PM***

SUBWAY (1739 N. High Street): *Sprints* - all are welcome!

## ***Monday, 9 AM***

CREATIVE ARTS ROOM: *Sprints* - all are welcome!

## ***Monday, 7 PM***

SUBWAY (1739 N. High Street): *Sprints* - all are welcome!

## ***Tuesday, 9 AM***

CREATIVE ARTS ROOM: *Sprints* - all are welcome!

## ***Tuesday, 7 PM***

SUBWAY (1739 N. High Street): *Sprints* - all are welcome!

## ***Saturday***

	<b>Round Room</b>	<b>Cartoon 1</b>	<b>Cartoon 2</b>
10:00	Project Management 101	Micro-optimization	Python Koans
11:00	Core Involvement	Postgresql	(continued)
12:00	Lunch	Lunch	Lunch
1:30	Numerical Simulation	Genetic Programming	Web Frameworks
2:30	Log Analysis	MongoDB (Python/IronPython)	(continued)
3:30	Bugfixing	GUI Tools	After Python 101
4:30	Python 101 for .NET	App Building	(continued)
5:30		Lightning Talks	

## ***Sunday***

	<b>Round Room</b>	<b>Cartoon 1+2</b>
12:30	Your Own Dictionary	Splunk
1:30	Hadoop	Supervisor
2:30	PyPy and Unladen-Swallow	Code With Style
3:30	Entrepreneurship	Lap Around IronPython
4:30		Faster
5:30		Lightning Talks