



Workshop Housekeeping

Python Fundamentals for Engineers and
Manufacturers

Hosted By

SME Chapter 112 Chicagoland



Workshop repo
<http://bit.ly/2opFIZ6>



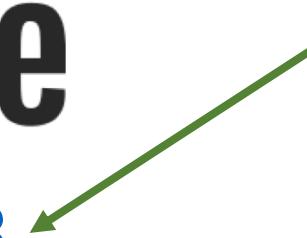
SME Chapter 430 Greater Charleston





YouTube

<http://bit.ly/2DlFGm3>



This is the best place to start!



<https://www.facebook.com/smevirtual/>



<https://www.linkedin.com/company/smevirtual/>

SME Connect and Slack



SME Connect

Connect, learn, support and engage with other like-minded manufacturing professionals.

TOP CHALLENGES

Adam Cook posted [Upcoming Python Fundamentals Workshop - Hosted by SME Chapter 112 and SME Chapter 430](#) in General Discussions on Feb 22 at 11:36pm

0 Replies

To all SME colleagues,

Just a friendly reminder. The first SME Virtual Network workshop is coming up in a week - Pytho...

Natalie Lowell, CMfgT posted [Volunteers Wanted, April 19, 2018 SkillsUSA North Carolina](#) in General Discussions on Feb 21 at 2:48pm

3 Replies

SME Members – This is Natalie Lowell in SME Membership and I'm currently recruiting members for leadership roles in...

Re: by Adam Cook on Feb 22 at 11:03pm

Natalie,

> I understand the travel challenge. SkillsUSA Indiana contests are held on April 13-14 in I

SME Virtual Network Slack

Are you an SME member? Request an invite here:
<http://bit.ly/2BpjMiE>

#general

☆ | 8 50 | 8 0 | Public discussion for virtual chapter | August 2nd, 2017

adamjcook 10:09 AM Just a reminder everyone....for today's Python webinar, we will be over in the #python channel. This channel will remain open after the webinar concludes for questions/feedback.

curtwanderson 12:11 PM joined #general along with 5 others.

Tuesday, January 9th

adamjcook 7:18 PM @everyone Hey everyone! Sorry we have been so quiet these past couple of months - we have been busy launching the SME Virtual Community based on what we started last summer and we already have several virtual events planned for 2018. Subscribe to our YouTube channel and take a look at the events we have planned here: https://www.youtube.com/channel/UC7DNeDhrD2a5Ptyo9Rm_wQ/videos?flow=grid&view=2 (edited)

YouTube

SME Virtual Community

Welcome to the YouTube channel for the SME Virtual Community! The SME Virtual Community is an online community for SME members, emerging professionals and st...

Wednesday, February 7th

adamjcook 9:40 AM @everyone Want to learn more about how AI will impact manufacturing? Join us for the first presentation of many this year as we explore this technology. As we do more presentations, the discussion will become more advanced as we work to actually apply AI. Tune in here on Feb. 13th at 11:00 am CST: <https://www.youtube.com/watch?v=orrVqOnFqds>

Where is all the info for this workshop?



<http://bit.ly/2opFlZ6>

All code is licensed under [The MIT License](#).

All written content is licensed under [Creative Commons Attribution 4.0 International Public License](#).



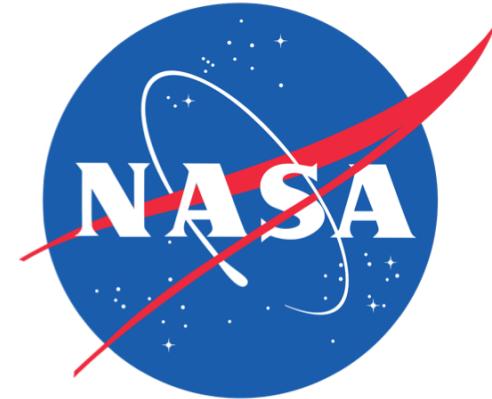
Inspire, Promote and Advance Manufacturing Technology to future generations.

Want to learn more about  ?

Check out sme.org

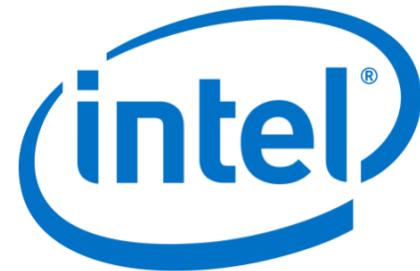
Why you might use Python?

Workshop repo
<http://bit.ly/2opFIz6>



 Lawrence Livermore
National Laboratory

LOCKHEED MARTIN



Argonne
NATIONAL LABORATORY

 BOEING



Google

rethink
robotics.[®]

TESLA

Why else?

Workshop repo
<http://bit.ly/2opFlZ6>



Python is versatile.

Python is accessible.

Python is fun.

Open-source projects on [GitHub](#)

Targeted webinars on [YouTube](#)

Real-world, industry use-cases on [YouTube](#)

Industrial hardware/software [hackathons](#)

Python	Data analysis, machine learning research and web applications.
C#	Motion controls, PAC programming and robotics development.
C++/C/Rust/Qt	Embedded systems programming and GPU/GPGPU programming.
Go/TypeScript	High-throughput industrial applications (e.g. real-time data ingestion).
Java/Kotlin/Swift	Industrial mobile applications for iOS and Android.

We ❤️ feedback and suggestions!

<http://bit.ly/2G42GXy>

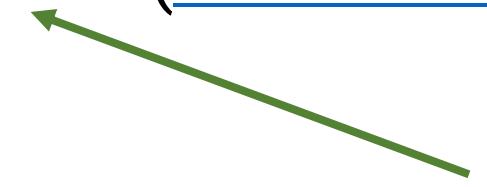
- Introduction to [Git](#).
- Introduction to the Python interpreter and [pip](#) ecosystem.
- Introduction to [Jupyter](#) Notebooks.
- Data types and objects.
- Reading and writing data.
- Control flow.
- Loops and iterables.
- Functions.
- Classes.
- Packages.

There will be do-it-yourself challenges throughout!

- Documentation.
- Testing.
- Debugging.
- Profiling.
- Network communication.
- Data exploration and visualization (with [NumPy](#) and [Pandas](#)).

There will be do-it-yourself challenges throughout!

- Concurrency and parallelism.
- Hardware description and verification ([HDL](#)).
- Computational geometry (pretty good video [here](#)).
- Image manipulation and machine vision.
- Neural networks ([CNN or ConvNet](#)).



Check out the [TensorFlow Playground](#).

There will be do-it-yourself challenges throughout!



<http://bit.ly/2sslEEA>

or

[SME Connect](#) and [Slack](#)