# ITB Tech Talks

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# 02 Virtual Environments in Python

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# Global Package Management

- starts out fine, overtime **things get messy**

- **problematic for developing in teams/multiple computers (sync issues)**

- not working if multiple projects require different versions (python/package)

- **often no control** over environment (compute server, deployment environments)

- **easy to break** things



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"Earlier you said we are losing ground. Could you be more specific?"

# Virtual environments

- **Virtual environment**
  Isolated python environment with own python executable and dependencies
  - reproducible (contains dependency & system setup)
  - isolated (does not affect system)
  - exchangable (computers & teams)

- **virtualenv** is a tool to create p**ython virtual environments**
  - virtualenv creates a folder which contains all the necessary executables to use the packages that a Python project would need.

- **virtualenvwrapper** is a **set of extensions** to virtualenv
  - wrappers for creating, deleting and managing virtual environments



## Python in a Box

# References

- http://docs.python-guide.org/en/latest/dev/virtualenvs/

- https://virtualenvwrapper.readthedocs.io/en/latest/

- https://www.slideshare.net/ryan_blunden/virtualenv-and-pip-isolated-python-environments