Python for Data Science

Sirakorn Lamyai

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Student, Kasetsart U.

About me

Sirakorn Lamyai

- DAKDL Laboratory, Kasetsart University
- Research Assistant Intern, 2019, Vidyasirimedhi Institute of Science and Technology
- Research Assistant Intern, 2018, Vidyasirimedhi Institute of Science and Technology
- Love drinking tea
- Knows a little about Python

I know a little about Python

When I say I know *a little* about Python...

- I think there's some better methods than I'm using
- I think I do sometimes make mistakes
- There are tons of people who know things much more than me
- I think there's much more for me to learn!

Prerequisite

A basic Python knowledge will do!

Your expectations from this talk

Outline

Data Science

Python

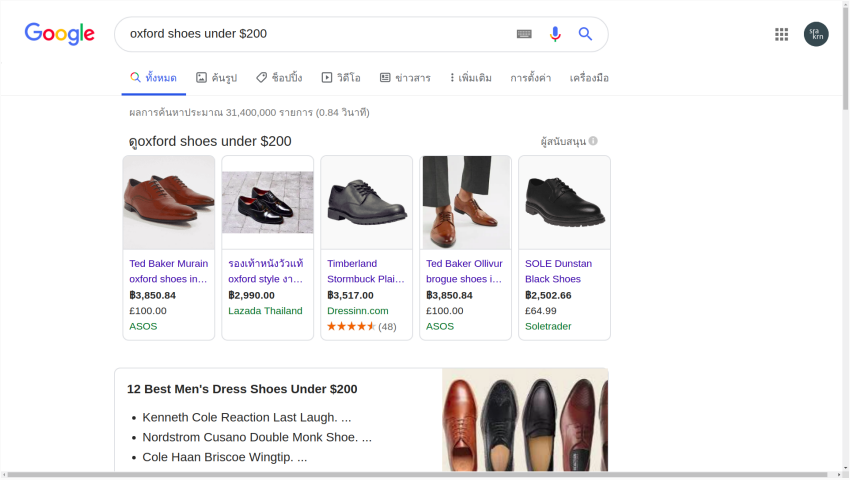
- Python environments

Data Science

The Data Science Process: OSEMNI

- **Obtain** data from relevent sources
- **Scrub**, sanitise, and clean the data into machine-understandable formats
- **Explore** significant and meaningful patterns with statistical methods
- **Model** construction for prediction and forecast
- **iNterpret** and use the results obtained
- **Interate** and rethink about your outputs

Why data?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oxford shoes under $200
ทั้งหมด
ค้นรูป
ช็อปปิ้ง
วิดีโอ
ข่าวสาร
เพิ่มเติม
การตั้งค่า
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฿3,850.84
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ASOS
รองเท้าหนังวัวแท้ oxford style งา…
฿2,990.00
Lazada Thailand
Timberland Stormbuck Plai…
฿3,517.00
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ASOS
SOLE Dunstan Black Shoes
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Soletrader
12 Best Men's Dress Shoes Under $200
Kenneth Cole Reaction Last Laugh. ...
Nordstrom Cusano Double Monk Shoe. ...
Cole Haan Briscoe Wingtip. ...

Why data?

Search
Sirakorn
Home
Create
Sirakorn Lamyai
News Feed
Messenger
Watch
Marketplace
Shortcuts
เทอมหน้าจะไปฝึกงา...
61/2 Algo II SKE
CPE Internship
ไรท์ดิ้งอินไทย - Writ...
See More...
Explore
Groups
Pages
Events
Fundraisers
Saved
See More...
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New Arrival Berwick Penny Loafer Collection !
Berwick Penny Loafer ที่มีรุ่นใหม่เข้ามาให้เลือกกันถึง 6 แบบเลยทีเดียวครับ ไม่ว่าจะเป็น Oiled 173 Suede, Polo Brown Suede ที่ได้รับนิยมมากๆในต่างประเทศ รวมถึงหนัง Smooth อีก 4 แบบที่สวยลงตัวมากๆ ไม่ว่าจะเป็น Vegano Melize, Moka และสุดท้ายเป็นสีดำ Black Box Calf ที่คลาสสิกตลอดกาล ----------... See More
Berwick
Patinya Yongyai (Not'Pty)
81 mutual friends
Add Friend
Remove
Kanoktat Ninklam
79 mutual friends
Add Friend
Remove
Rung Nattayaporn
3 mutual friends
Add Friend
Remove
Chakri Lowphansirikul
5 mutual friends
Add Friend
Remove
Unnop Nushprasert
15 mutual friends
Add Friend
Remove
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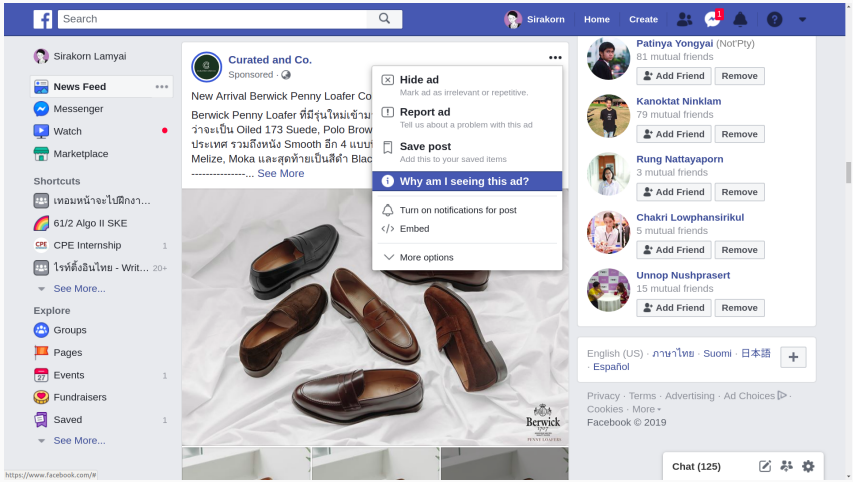
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Save post
Add this to your saved items
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Turn on notifications for post
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More options
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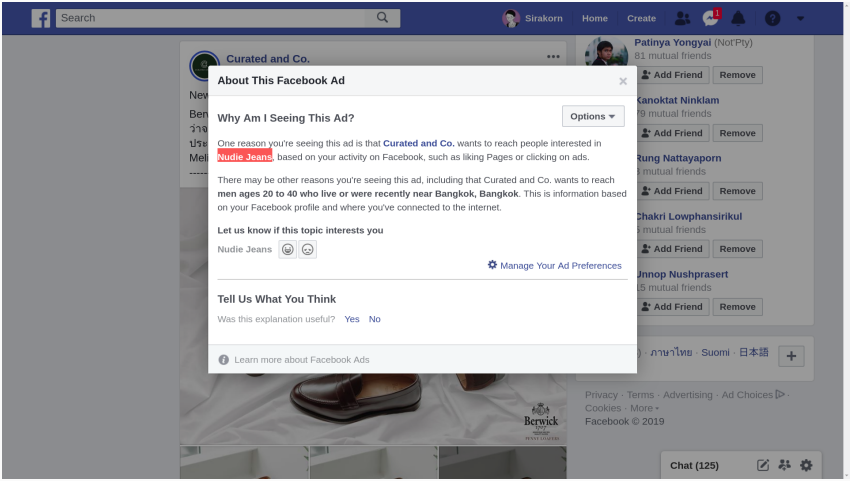
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Data is the new oil

Tools for data analysis

With GUIs

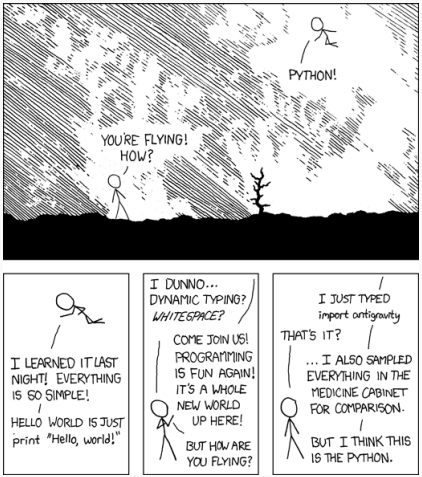
- Spreadsheets
  - Excel
  - Google Spreadsheets
  - Lotus 1-2-3
- Modelling and Visualisation
  - RapidMiner Studio
  - Weka
  - Tableau

As programming languages

- For data insights
  - R
  - Python
- For data retrieval
  - SQL

Python

Python



Courtesy: xkcd (`https://xkcd.com/353/`)

I *loved* Python...

- Read it, understand it
- Multiparadigm
- Batteris included
- Lots of great, great libraries!

Python Packages

`pip`

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- **PyPA** (**Py**thon **P**ackaging **A**uthority)'s recommended package installer

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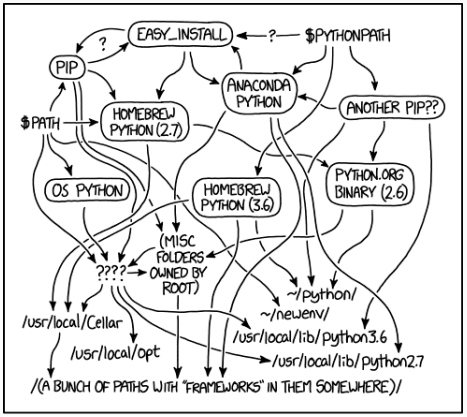
Python Packages

`pip`

- **PyPA** (**Py**thon **P**ackaging **A**uthority)'s recommended package installer
- Obtains packages from **PyPI** (**Py**thon **P**ackaging **I**ndex)
- Many useful packages for us to use!

...yet sometimes I still feels bad with it.



Courtesy: xkcd (`https://xkcd.com/1987/`)

Environments 101: $PATH

```
$ echo $PATH
/home/srakrn/.pyenv/plugins/pyenv-virtualenv/shims:/home/
   srakrn/.pyenv/shims:/home/srakrn/.pyenv/bin:/home/srakrn
   /.local/bin:/usr/local/bin:/usr/local/sbin:/home/srakrn/.
   local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/
   local/games:/snap/bin
```

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- `/home/srakrn/.local/bin:/usr/local/bin`

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- `/usr/local/sbin`
- `/home/srakrn/.local/bin`

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- `/usr/sbin`

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- `/bin`
- `/usr/games`

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- /usr/bin
- /sbin
- /bin
- /usr/games
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- `/usr/sbin`
- `/usr/bin`
- `/sbin`
- `/bin`
- `/usr/games`
- `/usr/local/games`
- `/snap/bin`