BD166: Advanced Data Handling

Classroom & System Requirements
Technical Setup Guide v2

COURSE REQUIREMENTS:

Unless otherwise noted, the client is responsible for providing and setting up everything outlined in this document.

CLASSROOM SETUP (for in-class presentation only)

Digital Projector (w/ cables and display unit)	Whiteboard, dry erase markers and eraser
Tables, desks, chairs to accommodate attendees	(2) Easels, flipchart paper (4) and markers
Power strips (2)	

STUDENT REQUIREMENTS:

- Individual Laptop or PC

HARDWARE REQUIREMENTS:

Processor	2.6 GHz Processor minimum
RAM	8 GB or higher
Available Hard Disk Space	10 GB of free disk space
Operating System	Windows 7/8/8.1/10, OS X, Linux
Network	Internet connectivity required

SOFTWARE REQUIREMENTS:

Software	Python (verions 3.9 or greater) Juypter Notebook Python libraries for Machine Learning
Student Lab Files	See note below

PYTHON INSTALLATION:

If you have a version > 3.9 then you can skip the python installation steps below.

Install Python on Windows:

- Open a command prompt
- Check python version by using following command

```
> python --version
```

NOTE: If you have a version > 3.9 then you can skip the next step

Use the following link to download Python:

https://www.python.org/downloads/release/python-31011/

- Look for "Files" heading

- Click on "Windows installer (64-bit)"
- Go to Downloads folder on Windows machine
- Double click on **python-3.10.11-amd64.exe**
  - Select "**Use admin ...**" and **"Add python.exe to PATH**"
  - Click "**Install Now**"

Once the installation is done, verify by doing following:

- Open command prompt

```
> python --version
```

It should show 3.10.11

Install Python on Linux (Ubuntu Example):

```
> python --version
```

- If the version is greater or equal than 3.9 you can skip this step

```
> sudo apt update
> sudo apt install python3.10.11
> make sure that python version is in your path variable
```

Install Python on MAC OS:

```
> python --version
```

If the version is greater or equal than 3.9 you can skip this step

Use the following link to install the software

https://www.codingforentrepreneurs.com/guides/install-python-on-macos/

Jupyter Notebook installation (Any OS):

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Use the link below for instructions. You can use the following command to install Jupyter Notebook:

https://jupyter.org/install

- In command prompt type:

```
> pip install notebook
```

This will take some time to install.

- Verify installation

```
> jupyter notebook
```

This will open a web browser
NOTE: if multiple browsers are installed, select the one you want to use

Python Libraries for machine learning:
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- Open terminal or command prompt based on your OS
- Run the following commands

```
> pip install numpy==1.23.2
> pip install pandas==1.5.1
> pip install scikit-learn==1.1.2
> pip install matplotlib==3.6.2
> pip install seaborn==0.12.1
```

VERIFICATION

1) Open Jupyter notebook via command by typing Jupyter notebook or open through Anaconda Navigator -> Juypter Notebook
2) Create a new notebook with Python 3
3) Run the following commands

```
3+4
```

It should return 7 as the result

STUDENT LAB FILES:

Materials will be shared during and after class

END