Topic 1: Introduction

- Topic 1: Introduction
  - An overview of where this course fits in the life of a Data Scientist.
  - Getting started with basic development tools for the course
    - VS Code IDE
    - Docker
    - Git
    - ...

Topic 1: ...Introduction

- Where this course fits in the life of a Data Scientist
  - The work of data scientists need to be made visible to users through channels that users are accustomed to.
    - Users as digital consumers
    - Users as Web friendly people
    - Users as Mobile friendly people

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- A Data Scientist does not necessary have to be a Web or mobile app developer.
- But, it is advantageous to be able to present your solutions yourself, in a dynamic and user interactive manner.
  - You do not have to be at the mercy of professional full stack developers to deliver solutions on the Web or mobile.
  - As a developer, you can command more respect and have greater competitive advantage in the job marketplace.

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Getting started with basic development tools for the course

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- **Our workstations need to be adequately equipped with requisite tools**
  - Requisite Runtime Environment (RTE) of chosen programming language
    - JavaScript?
    - Python?

  - Integrated Development Environment (IDE) of choice
    - VS Code?
      https://code.visualstudio.com/download
    - PyCharm?

  - Database Management System (DBMS) choice
    - PostgreSQL?
    - MySQL?
  - ...

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...Our workstations need to be adequately equipped with requisite tools

- Version control system
  - Git?
    - For windows OS, https://git-scm.com/download/win

- Operating System
  - Windows?
  - Mac?

- Testing / Staging / Deployment environment
  - Baremetal?
  - Containerized?
    - Docker download https://www.docker.com/products/docker-desktop/

- Let's experience docker with docker-compose

- Create a lesson project:
  - 1. Create a directory named *DAT620-MSC1set*
  - 2. Open folder in VS Code
  - 3. Add two files named
    - *docker-compose.yml*
    - *datmsc1.env*

– 4. Add the following content to *docker-compose.yml*:

version: '3'
services:
    database:
        container_name: postgres-datmsc1
        image: postgres:latest
        ports:
          - 5432:5432
        volumes:
          - /Users/piusonobhayedo/data/postgres/datmsc1:/data/postgres
        env_file:
        -   datmsc1.env

Reference for *docker-compose.yml* syntax:
https://docs.docker.com/compose/compose-file/

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– 5. Add the following content to *datmsc1.env*:

POSTGRES_DB=datmsc1

POSTGRES_USER=postgres

POSTGRES_PASSWORD=postgres

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- Test-run docker-compose on terminal, from the trial project directory *DAT620-MSC1set* by running the command:

    docker-compose up

- You should see the startup feedback on terminal

- More explanations in class!

Let's get a visual tool that we can use to explore our DBMS environment, from our desktop.

– Download and install PG Admin

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- Before we use our lesson project directory for JavaScript, Git initialize it by running on terminal, from the directory:

  git init

- To add a remote directory on GitHub:

  – 1. Login to your GitHub account online

  – 2. Create a new repository named *DAT620-MSC1*

  – 3. Copy the URL of the remote directory for local association

  – 4. Associate with the following command, on local terminal [PLEASE use your own repository address and not mine below]:

  git remote add origin https://github.com/piosystems/DAT620-MSC1.git