Session 9 Tasks

Task 1: Difference between IS-A relationship & HAS-A relationship

IS-A relationship : is one class inherits another class,

Has-A relationship: Whenever an instance of one class is used in another class

Task 2: what's super harvard architecture

Harvard architecture is a high performance floating-point and fixed-point DSP from Analog Devices. SHARC is used in a variety of signal processing applications ranging from audio processing, to single-CPU guided artillery shells to 1000-CPU over-the-horizon radar processing computers.

SHARC processors are typically intended to have a good number of serial links to other SHARC processors nearby, to be used as a low-cost alternative to SMP.

Task 3: unstructured DB examples

- NoSQL (non relational) database
- Data lakes
- Data warehouse

Task 4: Redo task 6 from the last session (diff. Between hadoop, spark , etc.)

Task 5: what's dockerization, containerization , kubernetes, jenkins.

- Dockerizing is the process of packing, deploying, and running applications using Docker containers. Docker is an open source tool that ships your application with all the necessary functionalities as one package
- Containerization is a form of virtualization where applications run in isolated user spaces, called containers, while using the same shared operating system (OS). One of

the benefits of containerization is that a container is essentially a fully packaged and portable computing environment.

- kubernetes is an open-source system for automating deployment, scaling, and management of containerized applications.
- jenkins.an open-source automation server which enables developers around the world to reliably build, test, and deploy their software.

Task 6: read a research paper about dataOps and suggest a way to develop this concept.

Task 7: what's better pip or conda

- **conda was about six times slower than pip** , conda is slower because it make sure there’s no conflict in the environment