

Abstract: Instead of short forms like ROI and SVM we should write their full forms. Let's change average accuracy for good quality image to 97% 96.12% to 75% on average and 90% for Yale face.

Data Preprocessing: Data preprocessing seems incomplete please finish it. Some preprocessing points remain like embeddings and etc.

Model Building: The preprocessed images are then converted to 128-d vectors called embeddings using a OpenFace algorithm.

In third paragraph there is a repetition. The Support Vector Machine is trained on top of embeddings. It works by mapping data to a high-dimensional feature space can be categorized, everything else seems good. In second paragraph and is too many times.

Restructure the References tab accordingly either put more links or shorten the gap.



## ACID Properties in DBMS:

A transaction is a single logical unit of work that accesses and possibly modifies the contents of a database.

Transactions access data using read and write operations. In order to maintain consistency in a database, before and after the transaction, certain properties are followed. These are called ACID properties.

**Atomicity:** Each transaction is considered as one unit and either runs to completion or is not executed at all. It involves the following two operations:

- **Abort:** If a transaction aborts, changes made to database are not valid.
- **Commit:** If a transaction commits, changes made are visible. Atomicity is also known as "All or Nothing Rule".

**Consistency:** This means that integrity constraints must be maintained so that the database is consistent before and after the transaction. It refers to the correctness of a database. Referring to the example



The total amount before and after the transaction must be maintained. Total before T occurs =  $500 + 200 = 700$ . Total after T occurs =  $400 + 300 = 700$ . Therefore, the database is consistent. Inconsistency occurs in case T1 completes but T2 fails. As a result T is incomplete.

**Isolation:** This property ensures that multiple transactions can occur concurrently without leading to the inconsistency of the database state.

Transactions occur independently without interference. Changes occurring in a particular transaction will not be visible to any other transaction until that particular change in that transaction is written to memory or has been committed. This property ensures that the execution of transactions concurrently will result in a state that is equivalent to a state achieved if these were executed serially in some order.



## Java OOPs Concepts

Types are: object, class, inheritance, polymorphism, Abstraction, Encapsulation, Coupling, Cohesion, Association, Aggregation, Composition

**Object:** Any entity that has state and behavior is known as an object. For example, a chair, pen, table, keyboard, bike, it can be physical or logical

An Object can be defined as an instance of a class. An object contains an address and takes up some space in memory. Objects can communicate without knowing the details of each other's data or code

The only necessary thing is the type of message accepted and the type of response returned by the objects.

**Class:** Collection of objects is called class.

It is a logical entity.

A class can also be defined as a blueprint from which you can create an individual object. Class doesn't consume any space.



There are four types of database

- Relational database System
- hierarchical database System
- network database Systems
- Object-oriented database Systems

A Relational database management system is one of four common types of systems

you can use to manage your business data

Hierarchical database model resembles a tree structure. Similar to a folder architecture in your computer system. The relationships between records are pre-defined in a one to one manner, between 'parent and child' nodes. They require the user to pass a hierarchy in order to access needed data. Due to limitations, such databases may be confined to specific uses.

Network database models also have a hierarchical structure. However, instead of using a single-parent tree hierarchy, this model supports many to many relationships as child tables can have more than one parent.



Kernel is central component of an operating system that manages operations of computer and hardware. It basically manages operations of memory and CPU time. It is core component of an operating system. Kernel acts as a bridge between applications and data processing performed at hardware level using interprocess communication and system calls.

Kernel loads first into memory when an operating system is loaded and remains into memory until operating system is shut down again. It is responsible for various tasks such as disk management, task management, and memory management.

It decides which process should be allocated to processor to execute and which process should be kept in main memory to execute.