PROBLEM STATEMENT

A NOVEL METHOD FOR HANDWRITTEN DIGIT RECOGNITION SYSTEM

WHO DOES THE PROBLEM AFFECT?

Solution:

- The numbers cannot be meaningfully compared.
- A person's handwriting can be drastically changed by drugs, tiredness, or illness.
- The quality of a comparison study is determined by the exemplars and finding excellent exemplars can be challenging.

WHAT ARE THE BOUNDARIES OF THE PROBLEM?

Solution:

- It has been demonstrated that raw data entering with no subsequent verification processes has an error rate as high as 4%. That means that for every five entries made, there are two mistakes.
- In a 2009 study, it was discovered that when processing the information from thirty datasheets, data entry workers can make up to 10.23 mistakes.
- A poll found that 37 percent of manufacturing experts do not believe manually entered data is reliable enough to use in making strategic decisions. This indicates a significant loss of time and resources in an endeavour that is becoming increasingly pointless.

WHAT IS THE ISSUE?

Solution:

- Data entering by hand takes numerous times. 10,000 to 15,000 keystrokes per hour is a decent rate for entering data from paper documents.
- Complex facts that require understanding before entry would slow down the process even more.
- Thus, it would take an experienced operator between eight and 10 minutes to enter 400 units of data, which is unsatisfactory when the volume of data is considerable.

WHEN DOES THE ISSUE OCCUR?

Solution:

- Data collection: According to 55 percent of the employees questioned, gathering, uploading, and syncing data is the manual data input process that is least productive.
- Obtaining Permissions: According to 36 percent of the employees polled, obtaining approvals, signoffs, and confirmations might hinder productivity.
- Delivering Updates 32 percent of staff members believe that maintaining status updates and other information takes time away from more beneficial work.

WHERE IS THE ISSUE OCCURRING?

Solution:

- The 1-10-100 data input rule establishes the financial cost of human data entering. According to the rule, verifying data accuracy at the time of entry costs $1, fixing errors in batches costs $10, and leaving errors unfixed costs the business $100 or more. If the data includes money, the price can be higher. According to a 2018 Goldman Sachs analysis, manual, paper-based invoice processing costs global firms $2.7 trillion in direct and indirect costs.
- Therefore, it would be illogical to use manual data entry as a cost-saving measure.

WHY IS IT IMPORTANT THAT WE FIX THE PROBLEM:

Solution:

- Automation makes structured data entry more accurate than manual entry.
- Data entry can be significantly sped up by automation, especially when numerous data from several sources needs to be combined into one format.
- Automation can be used to verify that entered data is accurate. A 2009 study found that using a software system to automatically review information resulted in an average error rate of 0.38 for thirty data sheets, compared to 10.23 for entries handled by volunteers.
- Redirecting valuable human time and effort to more useful and enjoyable tasks would increase work satisfaction and help retain employees.
- Reduction or elimination of paperwork, Data digitization can get rid of the paper trail that takes up room and requires attention to monitor.