Department of Computer Science and Engineering
Academic Year 2024 – 2025 (Odd Semester)

Degree, Semester & Branch : III Semester B.E CSE-B
Course Code & Title : CS3352 & Foundations of Data Science
Name of the Faculty member : Mr. K.Vignesh Saravanan, AP(SG) / CSE

Innovative Practice Description

- **Unit / Topic: Unit III / Describing Relationships /** Standard error of estimate
- **Course Outcome:** CO3
- **Topic Learning Outcome:** TLO 7
- **Activity Chosen:** Problem based Learning
- **Justification:**

  Problem-based learning is an educational approach in which the students learn by doing/ solving some problems and understand the core concepts clearly. Standard error of estimate is an evaluation in the finding the correlation of two variables. To better understand the error calculation process, the students are made to solve a problem. The prime objective of learning by doing is to enhance the problem solving and logical thinking of the students.
- **Time Allotted for the Activity:** 40 Minutes
- **Details of the Implementation:**

  In the previous class, the formulas for calculating the correlation values and standard error estimate values are discussed to the students. A problem statement was given to the students. In the class, the formula and steps were revised once again and the students were supposed to solve the given problem with their teammates. The screenshot of the problem solved by Ms.Surya Prabha is shown in figure-1. Students were asked to interact and share their ideas in calculating the error estimate methods. Finally, at the end of the session, answers were explained and discussed.
- **CO – PO / PSO mapping:**

CO	PO1	PO2	PO3	PO4	PO5	PO9	PO10	PO12	PSO1	PSO3
CO2	3	3	3	2	2	2	2	2	2	3

(1 – Low 2 – Moderate 3 – High)

- **PO / PSO mapped:**

Innovative practice	PO1	PO2	PO9	PO10	PO12
	2	2	2	2	1
Justification for correlation	Apply the knowledge of mathematical formulation for Standard error of estimate	Identify the appropriate methods to calculate the Standard error of estimate	Individually identify the problem and finding solutions	Deliver efficient document and solve the problem step by step	Recognize the need for Standard error of estimate in correlation problems in data analysis

- **Images / Screenshot of the practice:**

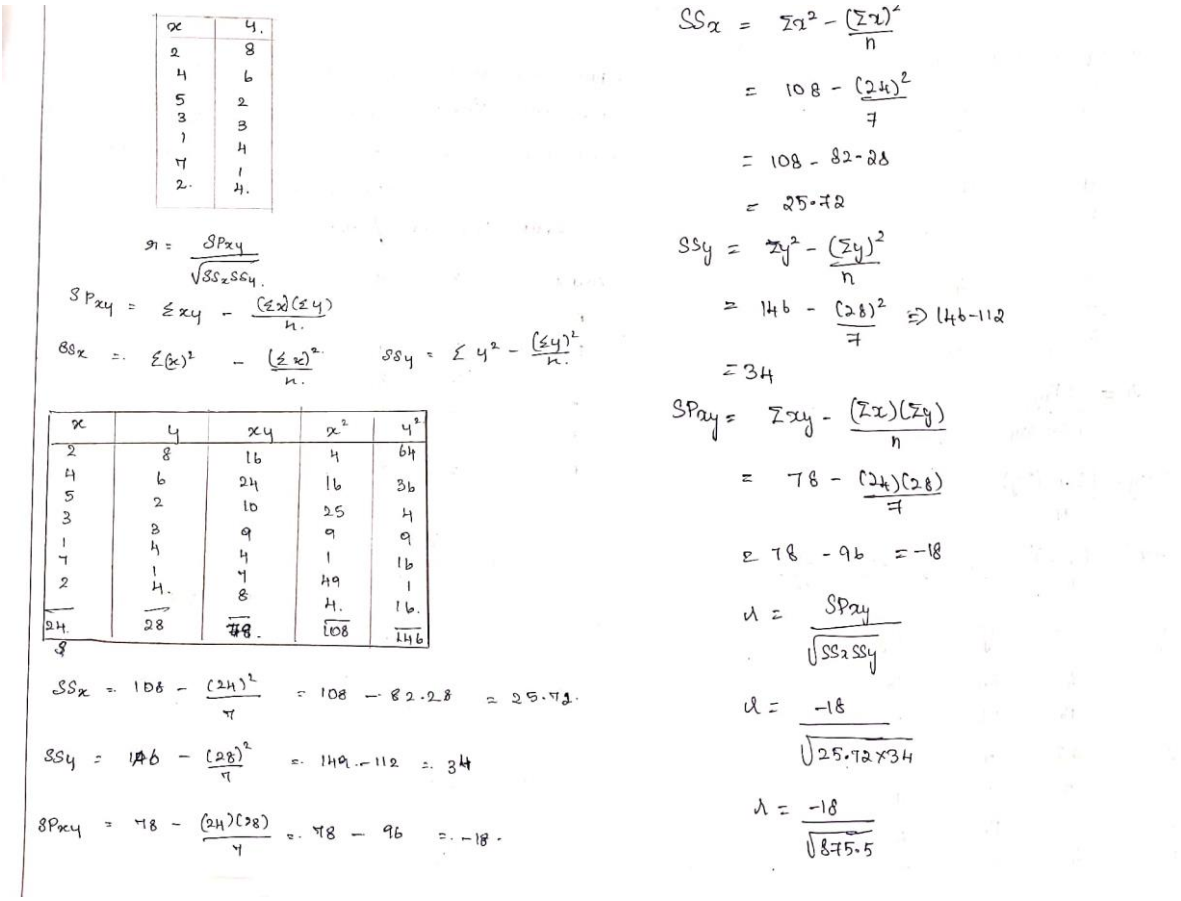

Figure-1 Screenshot of the problem solved by Ms.SuryaPrabha

❖ **Reflective Critique:**

❖ ***Feedback of practice from students and other stakeholders:***

Students enjoyed in solving the problem as a team and effectively competed with other student members and there was a healthy competition within the students.

❖ ***Benefit of the practice:***

- Students learned a few things individually that leads to self-learning. They also actively involved in this session rather than it being a one-way communication.
- This activity encouraged the students to share their knowledge with others.
- Students were able to connect ideas through discussion.

❖ ***Challenges faced in implementation:***

Slow learners were not comfortable in solving because of their individual (slow) learning background. However, they understood the concepts through the interaction within the team.

References:

❖ https://www.hunschool.org/resources/problem-based-learning

❖ https://teaching.cornell.edu/teaching-resources/engaging-students/problem-based-learning

❖ https://citl.illinois.edu/citl-101/teaching-learning/resources/teaching-strategies/problem-based-learning-(pbl)

❖ https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3748308/