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Differential Equation

Assignment #

03

Tech name ✓

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Topic

Application of Partial

Differential Equation

PDES (Partial differential equation) has many fields. The equation involving partial derivatives are known as PDES.

APPLICATION:

* In daily life

→ Partial derivatives are used in the basic laws of Physics for example

Newton laws of linear motion

Maxwell equation of electro magnetism.

and Einstein equation in general Relativity.

In the field of economics we use Partial differential equation to check what happen to other variable. while keeping one variable constant.

→ In the field of Civil Engineering is

Differential Equation are the true essence of the physical world. They are used to describe the physical phenomena which is an encountered at microscope as well as macroscopic level.

→ Differential equation are extensively involved in engineering.

→ As Civil Engineering mostly concerned with building structure and Geometrical shapes. So any work revolved around

modeling using differential equations if you have any complicated geometric which most realistic problems have you will likely to use the said differential equation in an approximation form work. like that of find (Differential Volume element) to approximately figure out a solution to a problem you care about

→ In the field of Mechanical engineering.

→ These are different orders of partial derivative describing the rate of change of a function representing real physical quantities.