DATA SCIENCE METHODOLOGY IN LEARNING PROGRAMMING

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Annotation: *This article talks about the methods used in the study of programming projects and explains several methods, i.e. the tasks to be performed are classified using step-by-step methods, and a comparative analysis is made with one of them, and the advantages and disadvantages are discussed, specifically for the proposed project. a suitable methodology is chosen, the process to be performed in it is analyzed step by step and it is envisaged to get the desired result.*

Key words: *Methodology, Analysis, Design, Development, Waterfall model, Agile model, Brain storm, Technical support, Research Methodology.*

INTRODUCTION

Before working on a project in any field, its methodology is developed, if this step is not followed, a number of problems may arise later as an example of this, we can take the field of programming as an example, that is, in this field, this expression is often used: "In programming, the earlier you start writing code, the later your program will finish" so first the methodology is developed and then the key step is recommended What is the methodology itself? - it can be defined as follows.

Methodology - the dictionary meaning is a system of certain methods used in an activity (science, politics, commerce)

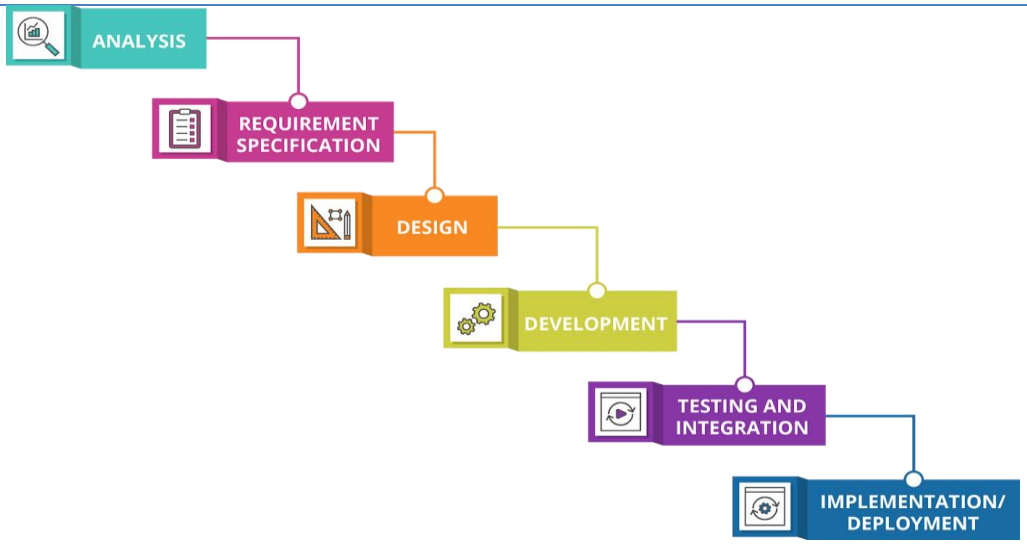
- Methodology is a general strategy that guides processes and activities in a certain field.

- The methodology does not depend on certain technologies or tools, nor is it a set of ready-made recipes

- Methodology tells data engineers what methods, processes, and research to use to get the desired results.

In other words, it is a sequence of steps, processes, and methods from a problem to a solution.

There are several methods of methodology in programming, and we can take the Waterfall model as an example.



That is, if there is a problem in front of us, in the first step, we will determine the requirements for it, and after this step is fully completed, we will go to the second step by working on a design suitable for our project from the design department and fully planning it. Let's move on to the coding section, one of the important parts and after testing the generated result, we move to the deploy, i.e., analysis section, in which if our program works correctly, we will achieve the goal set before us, or if we encounter an error, we will perform technical maintenance we will eliminate the shortcomings by moving to limit

Typically, this model - the waterfall model - is used to model smaller projects, and the project is presented to its owner until the sequence of steps is completed. If the project given to us covers large processes, then we use another methodology, the AGILE MODEL, when we compare the Waterfall model with the Agile model, we can come to the same conclusion, that is, if the Waterfall model is used in projects that are executed once, the Agile model is repeated used in the design of continuous processes, which we can see in detail in the table below:

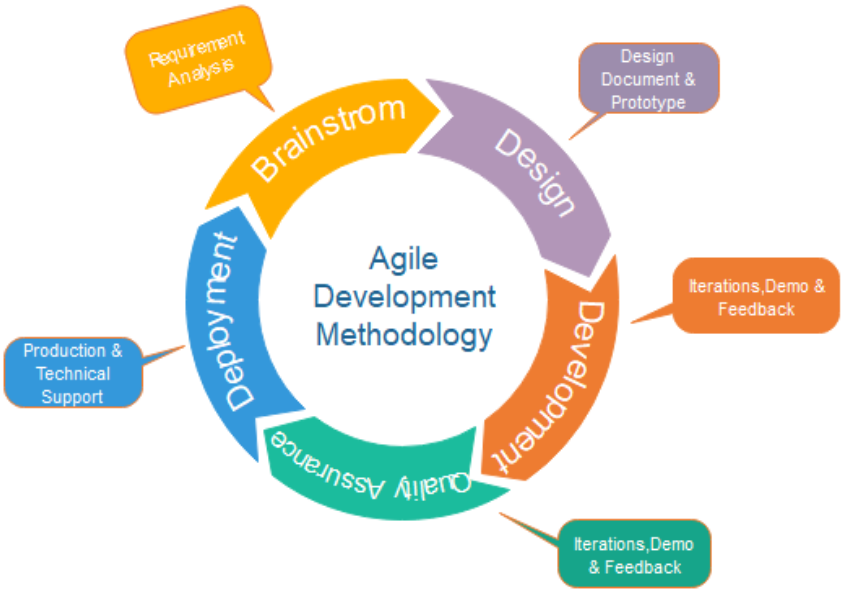
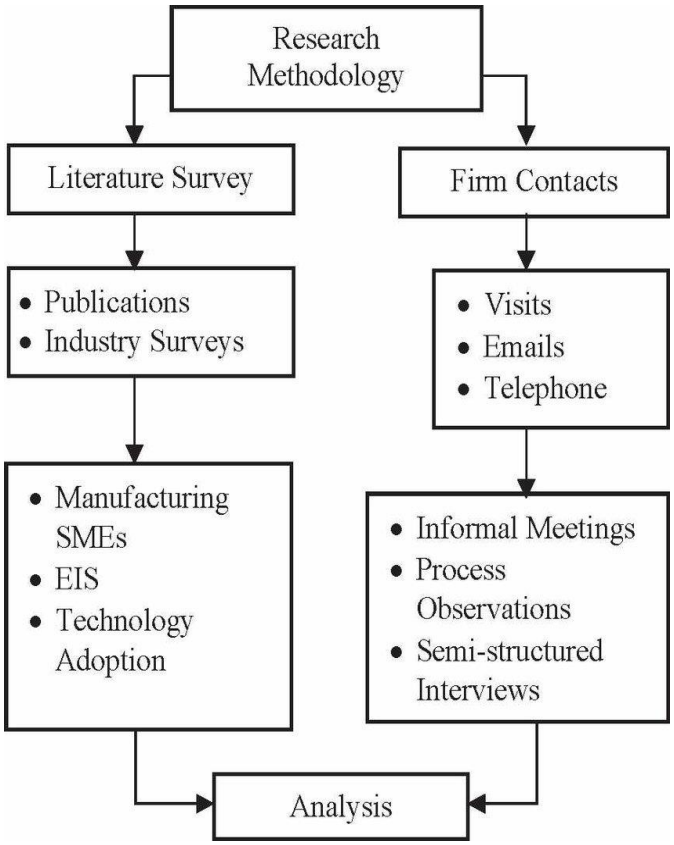


Fig. Agile Model

One of the unique features of the Agile model is that it is designed to work with large projects, in which iterative processes are designed, which are constantly updated and additional changes are constantly added. Since there are always many new changes in the programs, new functions are added or old functions are removed, the Agile model is used on a large scale.

Another widely used methodology is the Presentation Methodology method. Research methodology is the way in which the researcher explains how he intends to conduct his research. It is a logical, systematic plan for solving a research problem Methodology details the researcher's approach to research to ensure reliable, valid results that meet the researcher's goals and objectives. It includes what data it collects and where it comes from, as well as how it is collected and analyzed.



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