Chapter 15
Design for Mobile View Website Using Model View Controller

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ABSTRACT

This chapter gives a broad outline of machine learning and artificial intelligence and introduces the reader to many novel and most recent developments in the field of machine learning. The first half of this compilation provides an all-round view of the classical concepts of machine learning, namely: ensemble learning, concept of big data, handling of big data, and predictive data analytics using big data. Examples of machine learning (ML) frameworks are discussed, which are computer vision (CV), swarm algorithm, network science/graph theory and applications in machine learning, Bioinformatics using machine learning, and internet of things (IoT). A side note—R language is added as is the second most common language used worldwide for machine learning and this chapter spotlights mostly on Python language for ML. Deep learning, concepts, models, types, and algorithms in machine learning are elaborated in the subsequent section, followed by a detailed introduction to Neural networks, concepts of weight initialization, propagation, and vanishing gradient problem.

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INTRODUCTION

The front end of this website is built with React.js. Bootstrap was utilized in the development of the design. Bootstrap also helps with the responsiveness of the webpage and we can analyze the mobile view of the website. The client folder organizes the various components of each page into their own distinct folders, making it simpler for the developer to access the information they need. The images that are used throughout the entirety of the website each have their own folder.

Figure 1. Dependencies used in the project

```
{
  "name": "client",
  "version": "0.1.0",
  "private": true,
  "dependencies": {
    "@fortawesome/free-solid-svg-icons": "^6.2.0",
    "@fortawesome/react-fontawesome": "^0.2.0",
    "@testing-library/jest-dom": "^5.16.5",
    "@testing-library/react": "^13.4.0",
    "@testing-library/user-event": "^13.5.0",
    "axios": "^1.0.0",
    "bootstrap": "^5.2.2",
    "node-sass": "^7.0.3",
    "react": "^18.2.0",
    "react-bootstrap": "^2.5.0",
    "react-datetime": "^3.2.0",
    "react-dom": "^18.2.0",
    "react-export-table-to-excel": "^1.0.6",
    "react-router-dom": "^6.4.1",
    "react-scripts": "5.0.1",
    "react-social-icons": "^5.15.0",
    "react-toastify": "^9.0.8",
    "web-vitals": "^2.1.4"
  },
```

The image above shows the dependencies of the project: bootstrap, router-dom, react-dom, toastify, and fontawesome.

Below, we can see the App page which holds the links to each page of the website.