**TECHYJAUNT FRONTEND WEB DEVELOPMENT SYLLABUS**

**Pre-requisites**:

*No prior knowledge on frontend web development*

*Code editor such as VS code, Arom, Notepad etc.*

**General Introduction to Frontend Web Development and the Technologies Used**

* Overview of frontend web development
* Introduction to HTML, CSS, and JavaScript
* **HTML: HYPERTEXT MARKUP LANGUAGE**
  + Introduction and overview
  + HTML syntax: structure, tags, attributes, elements
  + HTML elements and their respective attributes: header elements, image element, link elements, paragraph element, form, ordered and unordered list, etc.
  + HTML grouping: using div and span tags for grouping
  + HTML forms: different types of input elements, placeholder attribute, required attribute, labels, buttons, etc.
  + HTML tables: representing tabular data using HTML table elements
  + HTML events
  + HTML header elements and meta tags
  + **Semantic HTML**: importance and usage of semantic elements like <article>, <section>, <header>, <footer>, <main>
* **CSS: CASCADING STYLE SHEETS**
  + Introduction to CSS
  + How CSS can be added to HTML: Inline CSS, Internal CSS, External CSS
  + CSS selectors: ID, class, universal selectors, grouping selectors, descendant/child selectors, pseudo-selectors
  + Background styling: bg-repeat, bg-position, bg-image, etc.
  + Styling fonts: color, bg-color, text-align, font-family, font-size, etc.
  + Box model: borders and outline, margin and padding, height and width, CSS dimensions
  + CSS display and positioning: visibility, display, scrollbars, static position, relative position, absolute position, fixed position, z-index
  + CSS media queries
  + CSS float and clear
  + CSS animations
  + CSS flexbox and grid
  + **CSS preprocessors**: Introduction to Sass or LESS, benefits, variables, nesting, mixins
  + **Responsive Design**: mobile-first design principles, responsive typography, and images
* **JAVASCRIPT**
  + Introduction to JavaScript, rules and syntax, commenting, etc.
  + Linking JavaScript to your HTML file
  + Dialog boxes: prompt box, alert box
  + Document Object Model (DOM)
  + JavaScript variables: var, let, and const keyword, variable scope, variable data types, reserved words
  + JavaScript operators: logic operators, arithmetic operators, comparison operators
  + Strings and their methods: length(), slice(), charAt(), toUpperCase(), etc.
  + Conditional statements: if-else statement, switch statement, while loop, do-while loop, for loop
  + Loop control: continue statement, break statement
  + Functions: function definition, anonymous functions, function calling, function parameters, return statement
  + Numbers and their methods
  + Arrays and their methods: push(), map(), pop(), unshift(), etc.
  + Objects: key-value pairs, dot notation, bracket notation, destructuring, spread operator, etc.
  + DOM manipulation: the event object, event propagation, event bubbling
  + Event listeners: submit, click, mouse-over, etc.
  + **ES6+ features**: arrow functions, template literals, promises, async/await
* **Version Control with Git**
  + Basics of Git and GitHub
  + Cloning, branching, committing, pushing, and creating pull requests
  + Importance of version control in collaborative projects
* **JavaScript Libraries and Frameworks**
  + Introduction to popular libraries/frameworks [React]
  + Basic usage and benefits of these tools
* **Build Tools**
  + Basics of npm (Node Package Manager)
* **Accessibility**
  + Importance of web accessibility
  + ARIA roles and attributes
  + Best practices for making websites accessible
* **Performance Optimization**
  + Basic techniques for optimizing website performance
  + Minification, image optimization, lazy loading
  + Importance of performance in user experience
* **Deployment**
  + Basic deployment concepts
  + Introduction to platforms like Netlify, Vercel, or GitHub Pages

### **Bonus Module: AI Won’t Take Your Job, But a Person Using AI Might**

* How to work alongside AI, not against it
* Ethics in Frontend web development and AI
* The future of work for Frontend web development

**Assignments and Projects:**

* Assignments will be given at the end of each class to ascertain understanding.
* Necessary videos and PDFs will be provided to guide students.
* At the end of the course, each student will be required to build three projects.