SKILL INTERN

FULL STACK WEB DEVELOPMENT

Designed for skill proficiency

PROGRAM HIGHLIGHITS

- **Basic-Advanced Level Training**
  By Experienced Mentors
- **Live & Recorded Lectures**
  At Your Flexible Schedule
- **Real Time Projects**
  Minor & Major Projects
- **Accredited certificates**
  Program approved ISO Certificate
- **Internships**
  Opportunities will be provided
- **Placement Guidance**
  Assistance from industrial EXPERTS

OUR MOTIVE

UPSKILL

Empowering Minds For Tomorrow

ENHANCE

Discover Your Next Ambition

MOTIVATE

Empowering Minds, Igniting Futures

ABOUT US

Skill Intern is a leading EdTech company dedicated to empowering engineering students with the skills and knowledge necessary to excel in today's competitive job market. Our mission is to bridge the gap between theoretical learning and practical application, enabling students to develop a strong foundation and enhance their employability.

Full Stack Web Development refers to the ability to work on both the front-end (client side) and back-end (server side) of web applications. Here's why it's a valuable and sought-after skill

WHY FULL STACK WEB DEVELOPMENT ?

- ❖ Comprehensive Skill Set
- ❖ End-to-End Development
- ❖ Efficiency and Cost-Effectiveness
- ❖ Flexibility and Adaptability
- ❖ Better Understanding of Projects
- ❖ Innovation and Creativity
- ❖ Educational and Professional Growth
- ❖ Enhanced Problem-Solving Skills
- ❖ Collaboration and Leadership

LEARNING PATH

- Introduction to Web Development
- Front-End Development Basics
- Introduction to Back-End Development
- Building and Deploying a Simple Application
- Advanced Front-End Development
- Intermediate Back-End Development
- Full Stack Integration
- Testing and Debugging
- Advanced Front-End Techniques
- Advanced Back-End Development
- DevOps and Deployment
- Capstone Project

Module 1: Introduction to Web Development

- Overview of Web Development
- Understanding Front-End vs. Back-End
- Basics of HTTP/HTTPS and Web Servers
- Introduction to Web Hosting and Domains

Module 2: Front-End Development Basics

- **HTML**: Structure of web pages, elements, attributes, forms
- **CSS**: Styling, layout, positioning, responsive design, media queries
- **JavaScript**: Basic syntax, variables, data types, operators, functions, DOM manipulation
- **Version Control**: Introduction to Git, GitHub

Module 3: Introduction to Back-End Development

- **Node.js**: Basics of server-side JavaScript, environment setup
- **Express.js**: Creating a basic web server, routing, middleware
- **Databases**: Introduction to databases, CRUD operations, SQL vs. NoSQL

Module 4: Building and Deploying a Simple Application

- Creating a static website with HTML, CSS, and JavaScript
- Introduction to Deployment: Basic concepts, deploying on GitHub Pages or Netlify

Module 5: Advanced Front-End Development

- **JavaScript**: Advanced concepts (ES6+ features, async/await, closures, prototypes)
- **Frameworks**: Introduction to React.js or Vue.js (components, state management, routing)
- **Build Tools**: Webpack, Babel, NPM/Yarn
- **APIs**: Consuming RESTful APIs, handling JSON

Module 6: Intermediate Back-End Development

- **Node.js and Express.js**: Building RESTful APIs, authentication (JWT), middleware
- **Databases**: Advanced database concepts (relationships, indexing, querying)
- **ORMs**: Introduction to Sequelize (for SQL databases) or Mongoose (for MongoDB)

Module 7: Full Stack Integration

- Integrating Front-End with Back-End
- Handling User Authentication and Authorization
- Working with APIs: Fetching and sending data between client and server
- Basic Error Handling and Validation

Module 8: Testing and Debugging

- **Testing**: Introduction to unit testing and integration testing (Jest, Mocha)
- **Debugging**: Common debugging techniques, using Chrome DevTools
- **Performance Optimization**: Basic strategies for improving web application performance

Module 9: Advanced Front-End Techniques

- **Advanced Frameworks**: In-depth React.js or Vue.js (hooks, state management libraries like Redux/Vuex)
- **Progressive Web Apps (PWAs)**: Service workers, offline capabilities, caching
- **Performance Optimization**: Code splitting, lazy loading, optimizing assets

Module 10: Advanced Back-End Development

- **Microservices Architecture**: Concepts, building microservices with Node.js
- **GraphQL**: Introduction to GraphQL, building and querying GraphQL APIs
- **Real-time Applications**: WebSockets, real-time communication with Socket.io

Module 11: DevOps and Deployment

- **CI/CD**: Continuous Integration and Continuous Deployment concepts
- **Containerization**: Introduction to Docker, creating and managing containers
- **Deployment**: Advanced deployment techniques, using cloud services like AWS, Heroku, or DigitalOcean

Module 12: Capstone Project

- Real-world Full Stack Application
  - **Project Planning**: Requirements gathering, design, and architecture
  - **Development**: Building both front-end and back-end components
  - **Testing**: Comprehensive testing of the application
  - **Deployment**: Deploying the application to a live environment
  - **Presentation**: Demonstrating the project and receiving feedback

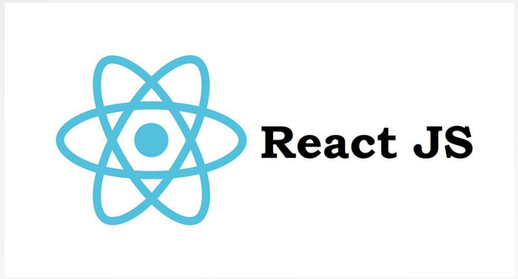
Assignments & Assessments

- Weekly assignments based on module topics
- **Mid-term project:** Wireframing and prototyping a small application
- **Final project:** Comprehensive FULL STACK WEB DEVELOPMENT project
- Participation in class discussions and activities

Recommended Reading

- **"Full Stack JavaScript Development with MEAN" by Colin J. Ihrig and Adam Bretz**
- **"You Don’t Know JS" (book series) by Kyle Simpson**
- **"Learning React: Functional Web Development with React and Redux" by Alex Banks and Eve Porcello**

FRAME WORKS



TOOLS USED

Bootstrap **Node js** **Docker**

In case of additional tools used, It will be discussed in live class

CERTIFICATIONS

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THANK YOU

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