

Advanced Diploma in Software Development

WHY TRON?



Welcome to Tron Academy, where we bridge the gap between theoretical knowledge and practical experience. Our mission is to equip students with real-world skills, ensuring they are job-ready from day one. With a focus on hands-on learning and industry-relevant projects, Tron Academy stands out as a leader in digital education.

Tron Digital, our sister company, is a renowned digital marketing agency with a proven track record of success. By collaborating with Tron Digital, our students gain exclusive access to live projects, internships, and insights from industry experts. This unique partnership ensures our curriculum is aligned with the latest market trends and demands.

WHY SOFTWARE DEVELOPMENT?

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Why Choose Software Development?

01. What is Software Development?

Software development involves designing, coding, testing, and maintaining software applications. It covers everything from mobile apps to complex enterprise systems.

02. Why is Software Development Important?

In today's digital age, software is integral to almost every industry. It drives innovation, automates processes, and improves efficiency across sectors.

03. What Career Opportunities are Available?

The software industry offers a wide range of career paths, including roles like full-stack developer, mobile app developer, and software engineer.

04. Who Should Consider a Career in Software Development?

Whether you're a fresh graduate, a career switcher, or someone passionate about technology, software development offers endless possibilities.

05. Is Software Development a Good Career Choice?

Yes, it's one of the most in-demand fields today, with opportunities for growth, high salaries, and the potential to work in various industries.

06. How is the Job Market for Software Developers?

The demand for skilled developers is constantly rising, with opportunities in tech companies, startups, and across various sectors like finance, healthcare, and more.

07. How Does Software Development Help Businesses?

It enables businesses to create custom solutions that address specific needs, leading to increased efficiency and competitiveness.

08. What is the Future of Software Development?

The future is bright, with emerging fields like AI, machine learning, and IoT creating new opportunities and challenges.

09. What Makes a Successful Software Developer?

A successful developer is analytical, detail-oriented, and adaptable, with strong problem-solving skills and a passion for learning new technologies.

10. How Does Software Development Compare to Other Tech Fields?

Software development offers more hands-on creation and problem-solving opportunities, often with more direct impact on a business's operations.

11. What Are the Biggest Challenges in Software Development?

Keeping up with rapidly evolving technologies, debugging complex issues, and managing project timelines are some of the biggest challenges.

12. What Industries Benefit the Most from Software Development?

Virtually every industry benefits, particularly technology, finance, healthcare, and retail, where software solutions are key to operations.

Basic Developer Program



Placement Support:

Assistance in securing a job
after course completion.



Internship Certificate:

Validate your practical experience
with an official certificate.



Internship with UAE Based Projects:

Hands-on experience with
projects based in the UAE.

Duration:
3 Months

Schedule:
5 Hrs/Day

Fees:
Rs. 65,000



Course Modules



Introduction to Web and App Development- 1 Week

Overview of Web and App Development

Introduction to various development technologies and stacks

Setting up development environments (IDEs, version control, etc.)

Basic principles of software development and project management

Introduction to best practices in coding and development workflows

Choose One Option:

OPTION I

MERN Stack Development

1. Introduction to MERN and Frontend

Working of internet and websites

Html and small project

Css and small project

Bootstrap and small project

2. javascript and query

Basics of javascript

Advanced javascript and DOM manipulation with project

Jquery with project

3. Introduction to backend

Node and express

EJS, git, and APIs, middlewares

Databases- sql, postgres, mongodb (validation and CRUD)

4. Authentication and security

Various authentication methods

Error handling and data validation

Router, controller setup

5. React

React basics to advanced

Local and global state management

Connecting to backend

Redux toolkit

Tailwind css

6. Deployment and DevOps

Deployment strategies and environments (Heroku, AWS, DigitalOcean)

Introduction to CI/CD pipelines

Monitoring and performance optimization

OPTION II

Flutter App Development

1. Introduction to Flutter and Dart

Dart programming fundamentals
Flutter framework overview and setup
Building basic Flutter apps and layouts

2. Widgets and UI Design

Exploring Flutter widgets (Stateless vs Stateful)
Custom widgets and layout design
Advanced UI techniques (Animations, Responsive design)

3. State Management

Introduction to state management concepts
Using Provider and Riverpod
Advanced state management with Bloc

4. Networking and API Integration

Fetching data from REST APIs
Handling JSON and asynchronous operations
Error handling and state management for network requests

5. Local Storage and Persistence

Using Shared Preferences and SQLite

Managing local data and caching

Integrating local storage with app functionality

6. Testing and Debugging

Unit testing, widget testing, and integration testing

Debugging techniques and performance optimization

Writing effective test cases and handling exceptions

OPTION III

Python and Django Full Stack Development

Working with WordPress APIs

Security practices and performance optimization

1. Python Programming Fundamentals

Python basics (syntax, data types, control structures)

Object-Oriented Programming (OOP) in Python

Working with libraries and modules

2. Introduction to Django

Setting up a Django project and application

MVC architecture in Django

Working with Django models, views, and templates

3. Advanced Django Features

User authentication and authorization

Working with Django admin and custom management commands

Creating RESTful APIs with Django REST Framework

4. Frontend Integration

Integrating HTML, CSS, and JavaScript with Django templates

Using frontend libraries and frameworks

Form handling and validation

5. Database Management

Advanced ORM techniques and database optimization

Handling complex queries and migrations

Integrating third-party databases

6. Deployment and Best Practices

Deploying Django applications (Heroku, AWS, DigitalOcean)

Security best practices and performance tuning

CI/CD pipelines for Django applications

OPTION IV

Python Data Science – ML, AI, and Power BI

1. Introduction to Data Science with Python

Data analysis and visualization with Pandas and Matplotlib

Data preprocessing and cleaning techniques

Exploratory Data Analysis (EDA) practices

2. Machine Learning Fundamentals

Supervised learning algorithms (Regression, Classification)

Unsupervised learning techniques (Clustering, Dimensionality Reduction)

Model evaluation and metrics

3. Advanced Machine Learning and AI

Neural networks and deep learning (TensorFlow, Keras)

Introduction to Natural Language Processing (NLP)

Building and evaluating AI models

4. Power BI Basics

Introduction to Power BI and its components

Data import, transformation, and visualization

Building interactive dashboards and reports

5. Advanced Power BI

Data modeling and advanced visualization techniques
Using Power BI with machine learning models
Creating and publishing reports and dashboards

6. Integrating ML Models with Power BI

Importing and integrating ML models into Power BI
Building real-time and interactive visualizations
Best practices for data integration and presentation

OPTION V

Web Development with WordPress, HTML, CSS, JavaScript, PHP, and MySQL

1. Introduction to Web Development Basics

HTML and CSS fundamentals
Building responsive web layouts
Introduction to JavaScript and DOM manipulation

2. Advanced HTML, CSS, and JavaScript

CSS Grid and Flexbox
Advanced JavaScript (ES6+ features, asynchronous programming)
Integrating JavaScript libraries

3. Server-Side Development with PHP

PHP basics and server-side scripting

Working with forms and sessions

Connecting PHP with MySQL databases

4. MySQL Database Integration

Database design and normalization

CRUD operations with MySQL

PHP and MySQL integration

5. Introduction to WordPress

Installing and configuring WordPress

Customizing themes and plugins

Creating and managing content in WordPress

6. Advanced WordPress Development

Developing custom themes and plugins

Working with WordPress APIs

Security practices and performance optimization

Life Set Developer Program



Placement Guarantee:

100% job placement guarantee
upon course completion.



Internship and Work Experience Certificate:

Gain practical experience and a certificate
to showcase your skills.



Work on GCC Based Projects:

Engage in real-world projects
tailored to the GCC market.

Duration:
6 Months

Schedule:
5 Hrs/Day

Fees:
Rs. 1,50,000



Course Modules

First 3 Months Remains the same as Basic Course,
Remaining 3 Months Depends on the option chosen

MERN Stack Development

Project Development and Finalization

Working on a full-stack MERN application project

Weekly milestones and reviews

Final project presentation and critique

Flutter App Development

Project Development and Finalization

Developing a complete Flutter application project

Weekly milestones and reviews

Final project presentation and critique

Python and Django Full Stack Development

Project Development and Finalization

Developing a complete Django full-stack project

Weekly milestones and reviews

Final project presentation and critique

Python Data Science – ML, AI, and Power BI

Project Development and Finalization

Working on a comprehensive data science and Power BI project

Weekly milestones and reviews

Final project presentation and critique

Web Development with WordPress, HTML, CSS, JavaScript, PHP, and MySQL

Project Development and Finalization

Building a complete website or application using WordPress and PHP

Weekly milestones and reviews

Final project presentation and critique

Portfolio and Work Experience Certificate



Why it matters?

We believe in the power of experience and a strong portfolio.

Our programs are designed to help you build both, ensuring you stand out in the job market.

Industry Standard Tools

We teach you the best tools available in the market, ensuring you are proficient in the latest technologies.

Tools will change, and new ones will emerge. Our focus is on making sure you understand the principles and can adapt to any tool.



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Other Certifications

We don't believe in relying solely on free certifications like those from HubSpot and Google.

These certifications may look good on paper but don't necessarily translate into job readiness.

Mission And Vision

Mission:

To provide practical, hands-on education that prepares students for real-world challenges. We aim to bridge the gap between theoretical knowledge and practical application.

Vision:

To revolutionize education by focusing on practical experience and niche expertise. We believe that traditional education, which emphasizes theory over practice, leaves students unprepared for the job market. Our goal is to change that by providing real-world experience and helping students secure meaningful employment in their chosen fields.



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SOON**



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