

#Empowering Minds

Rooted | Recruited

ROOTED IN SKILLS, RECRUITED FOR SUCCESS.



Data Science & AI

TRANSFORMING POTENTIAL INTO PROFESSIONALS.

About ITROOTS

At ITROOTS, we believe in transforming potential into professional excellence.

With over two years of proven success in Online training, ITROOTS now brings its industry-focused expertise OFFLINE , empowering learners across India to become job-ready professionals.

Our mission is to equip every learner with industry-ready skills, hands-on experience, and career confidence through AI-integrated, project-based learning.

Why Choose ITROOTS?

Choosing the right training partner can define your career and at ITROOTS, we turn your goals into guaranteed outcomes.

Why learners and employers trust us:



100% Placement Guarantee: We ensure every learner achieves their career goal.



Refund Guarantee: If we don't deliver as promised, your investment is safe.



Post-Placement Support: Continued guidance even after you're hired.



Lifetime Career Assistance: Ongoing mentorship and growth support



Project-Oriented, AI-Integrated Training: Learn through live, industry-level projects.



Expert Mentorship: Trainers with 10+ years of industry experience



Daily 5-6 Hours of Practical Training: Focused, hands-on sessions.



Regular Assessments & Mock Interviews: Build confidence before stepping into interviews.

At ITROOTS, you don't just learn, you build, apply, and grow with every step.

Program Overview

The Java Full Stack Development (AI-Integrated) Program is a complete 6-month career transformation journey designed to make you an industry-ready developer.

You'll learn to build applications from scratch to mastering frontend, backend, and database development, while integrating AI tools that enhance productivity, debugging, and real-world problem-solving.

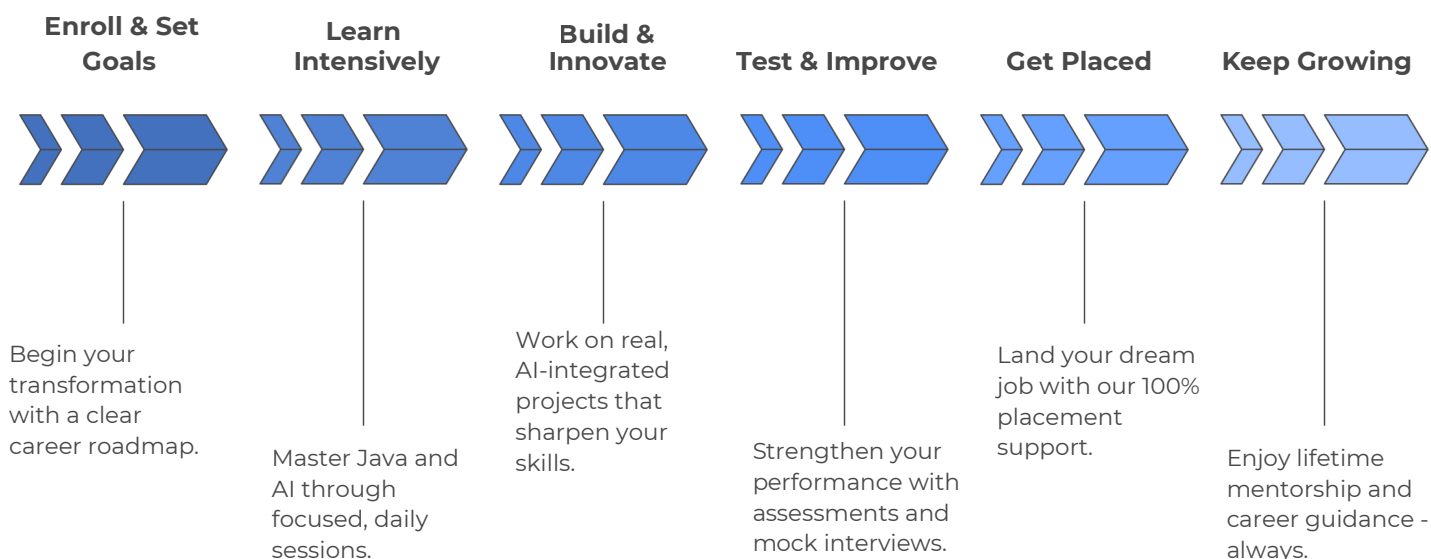
Duration: 6 Months

Mode : Online / Offline

Ideal for: Graduates, Job Seekers, and Working Professionals

The Learning Journey

Every learner at ITROOTS follows a path that ensures real progress and measurable results:



Data Science & AI Syllabus

Module 01

Fundamentals of Data Science & AI

- Data Science and its concepts
- Artificial Intelligence and its types
- Machine Learning and its types
- Essence of data in Data Science
- Various Data Formats, Data Storage
- Data Warehousing, Big Data,
- Application of statistics in Data Science

Module 02

Python Programming

- Introduction to Python
- Variable and constants
- Conditional constructs and loops
- List, Tuples, Sets and Dictionary
- Function, Modules and Packages
- Object Oriented Programming
- Exception Handling
- Database handling in Python
- String and Regular Expressions
- Lambdas and Higher Order Functions
- Generator and iterators
- Map, Filter and Decorators
- Capstone Project

Module 03

SQL

- Introduction to RDBMS concepts
- Retrieving data
- Filtering and Sorting data
- Single row functions
- Aggregate functions
- Joins, Sub-queries
- CRUD using SQL syntax
- DDL, constraints

Module 04

Excel for Data Analysis

- Introduction to Excel for BI
- Data Entry and Cleaning
- Essential Formulas and Functions
- Data Analysis Tools
 - Pivot Tables and Pivot Chart
 - Power Pivot and Data Modeling
- Data Visualization- Excel Graphs
- Excel BI Dashboards
- Integration and Automation

Module 05

Data Science Libraries

A. Numpy

- Introduction to Numpy
- Creating Numpy Arrays
- Manipulation Numpy Arrays
- Indexing, Slicing,
- Broadcasting and Reshaping
- Arithmetic, Trigonometric functions
- Statistical Function in Numpy

B. Pandas

- Introduction to Pandas
- Pandas Data Structures
- Handling Pandas Data Series
- Pandas Data Frames
- Import & Exporting data from Excel files
- Import & Exporting data from CSV files
- Querying Data Frames
- Indexing, Slicing Data Frames
- Pandas Statistical Functions
- Exploratory Data Analysis In Pandas
- Data Cleansing functions in Pandas
- Query() and groupby() in Pandas
- Filter with loc and iloc in Pandas

Module 05

Data Science Libraries

C. Data Visualization Libraries

- Introduction to Matplotlib
- Data Visualization with Numpy & Matplotlib
- Line graph, Bar Graph, and Histogram
- Scatter plots, Box Plots and Pie charts
- Confusion Matrix Heatmaps using SNS library

Module 06

Python Powered Statistics

- Statistics and its Types
- Descriptive statistical concepts
- Measures of Central tendency
- Measures of Dispersion
- Measures of Relationship
- Measures of Shape
- Moments, Correlation and Regression
- Probability and its Types
- Naïve Bayes - Conditional probability
- Probability Distributions
- Sampling Theory
- Hypothesis Testing
- Confidence Interval

Module 07

Data Science–Machine Learning

- Artificial Intelligence and its Types
- Introduction to Machine learning (ML)
- Applications of Machine Learning
- Supervised Machine learning (SML)
- Supervised Machine Learning algorithms
- Linear Regression, Logistic Regression
- Decision Tree, Random Forest
- Support vector Machine and KNN
- Train test Split in ML
- Working of ML algorithms

Module 07

Data Science–Machine Learning

- Performance metrics of Regression Supervised ML
- Data Visualisation
- Performance metrics of Unsupervised ML
- Confusion Matrix and Heatmap for Classifications
- And Hyper parameter in Classification SML
- Hyper parameter tuning & GridSearchCV
- K-fold Cross Validation technique
- Applications of Supervised Machine Learning
- Unsupervised Machine Learning
- Unsupervised Machine Learning Algorithms
- Clustering – K-Means Clustering
- Dimensionality Reduction – PCA
- Applications of Unsupervised Machine Learning
- Introduction to Neural Networks
- Introduction to Deep Learning
- Natural Language Processing (NLP)
- Overview of Generative AI

Module 08

R Programming for Data Science

- Introduction
- R Programming Constructs
- Data Structures in R
- Function In R
- Data Cleansing in R
- Machine Learning in R
- Regression In R
- Classification in R

Module 09

Capstone Project

- Project Life Cycle
- EDA
- Implement using ML
- Summary Report of Project Analysis

Module 10

Gen AI

- Evolution of AI to Generative AI
- Foundation Models & Transformers
- Prompt Engg Essentials
- Generative AI tools and Platforms
- Responsible AI Use

Module 11

Employability Lab

- Personal Mentoring
- Extensive Practice
- Grooming by Industry Expert
- Interview Preparation

Module 12

Quantitative Aptitude

- Numbers
- Progressions
- HCF & LCM
- Percentages
- Calendars and Clocks
- Averages
- Ratio, Proportion & variations & partnership
- Time Speed and Distances
- Simple and Compound interest
- Profit and Loss
- Mixtures and Allegations
- Work, Pipes and Cistern
- Permutations and Combinations
- Probability
- Sets and relations
- Sequence and Series
- Faster Calculation techniques

Data Science Tools



Our Role in Your Success

At ITROOTS, our commitment goes beyond teaching. We partner with you throughout your career journey. From learning the latest technologies to securing your dream job, we make sure you're guided, supported, and ready for real-world success.

1. Skill Advancement & Technology Mastery

We train you in the most in-demand tools and technologies used by leading IT companies.

You'll master:

- Frontend: HTML, CSS, JavaScript, Bootstrap, React / Angular
- Backend: Core Java, Spring Boot, Hibernate
- Database: MySQL, Oracle
- Tools & AI: Git, JIRA, Jenkins, AI-powered coding tools
- Practices: Agile, SDLC, MVC Architecture



Each session combines concepts with hands-on practice, ensuring you graduate with industry-ready skills and real project experience.

2. Continuous Career Support

We don't just train you; we prepare you to thrive.

Our dedicated career team provides:

- Resume & LinkedIn optimization
- Technical & HR mock interviews
- Personalized career counselling
- Access to exclusive job networks and hiring partners
- Lifetime mentorship for continuous growth and upskilling



3. Guaranteed Placement Assistance

Your success is our goal.

Through our Hire → Train → Deploy model, we ensure every learner is:

- Trained with AI-integrated, project-based sessions
- Evaluated through tests and mock interviews
- Deployed into top IT companies with complete career readiness

With our 100% Placement Guarantee and Refund Assurance, your journey with ITROOTS is result-driven, transparent, and focused on success.



Alumni Success Stories



ITROOTS is one of the best institutes for training and placement. The trainers are experienced, supportive, and always approachable. I completed my Full Stack Java Certification from ITROOTS and got placed as a Software Developer. Grateful to the entire ITROOTS team for their constant guidance.

~ **Priya Wagh**

Joining ITROOTS was the best decision for my IT career. In just six months, I learned Frontend, Backend, and Database technologies and got placed within a week after completing the course. The placement team is truly dedicated and helpful throughout the process.

~ **Harsh Patil**



ITROOTS is an excellent place for learning and placement. The team is very supportive and helps you build knowledge from the basics, even if you come from a non-IT background. Thank you, ITROOTS, for helping me start my career with confidence.

- **Mayur Aware**



250+ Success stories so far and counting
visit our website for more success stories and get inspired

Our Client Partners



and many more....

Our Commitment

“Rooted in Skills. Recruited for Success.”

At ITROOTS, we promise outcomes, not just education. With 100% Placement Guarantee, Refund Assurance, and Project-Oriented Training, every learner becomes a professional with confidence and clarity. We prepare you for industry success with real skills, real projects, and lifelong support.

Your growth doesn't stop at placement, it starts there.

Contact Us

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