

PREMIER TECHNOLOGY & SKILL EDUCATION

FULL STACK WEB DEVELOPMENT & AI

Master Modern Frontend Architecture, React.js, Node.js Microservices, MongoDB Atlas, RESTful APIs & Generative AI Pair Programming through 70% live production coding and real-world web deployment.

**1 YEAR**48 WEEKS
COMPREHENSIVE**70 : 30**HANDS-ON CODING :
THEORY**25+**PRODUCTION WEB
APPS**100%**

PLACEMENT SUPPORT

Modern React.js • Node.js & Express • MongoDB Atlas • Gen AI Coding Tools • Full Stack Placement

WINNOVATION EDUCATION PVT. LTD.
Building Careers Since 2017 | Greater Noida,
Delhi NCR

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Web: www.winnovation.org | Campus: 1157, i-Thum Galleria,
Alpha 2

Accelerate Your Career with Winnovation

Bridging the divide between academic theory and scalable production full-stack software engineering.



“At Winnovation, our purpose is driven by the **future of our youth**. In today’s AI-accelerated digital economy, mastering **Full Stack Web Development with Generative AI** empowers engineers to build scalable, production-grade applications at 10x velocity. We established Winnovation to bridge the gap between static classroom coding and enterprise-grade software architecture—ensuring our students architect responsive user interfaces, robust backend APIs, and secure database layers to thrive in elite tech environments.”

Sarbarinder Singh

Director, Winnovation Education Pvt. Ltd.

“Win With Winnovation”

Recognized Skill Incubator

NEP 2020 & Competency-Based Education (CBE) Blueprint

Winnovation curricula strictly align with India's **National Education Policy (NEP 2020)** and **CBSE Vocational Skill Education** paradigms. We replace rote memorization with experiential problem solving using Bloom's Taxonomy.

70% Hands-On Coding Labs

Building live responsive applications with modern component libraries, serverless APIs, and automated database migrations.

AI-Augmented Engineering

Leveraging GitHub Copilot, Claude, and modern AI development workflows to accelerate development, testing, and automated refactoring.

Outcome-Driven Portfolios

Every module produces verifiable public web systems deployed with live production URLs, CI/CD pipelines, and GitHub code.

CBSE Vocational Assessment Scheme (100 Marks Blueprint)

Assessment Component	Weightage	Evaluation Criteria	Frequency
Continuous Formative Coding Sprints	30 Marks	Weekly responsive UI builds, API routes, and schema migration labs	Weekly Milestones (12 Sprints)
Mid-Term Full-Stack Hackathon	20 Marks	Live 4-hour hackathon building an end-to-end full-stack feature module	End of Month 1 & Month 2
Comprehensive Production Capstone	20 Marks	Full production web platform (Skill Bridge, Campus Connect, Shop Smart)	Final Capstone Showcase
Certified Code Repository & Journal	15 Marks	GitHub repository with clean modular code, unit tests & deployment configs	Terminal Evaluation
Technical Whiteboard & Architecture Viva	15 Marks	Oral defense solving architecture challenges before industry SDE panel	Final SDE Jury Review

Surging Industry Demand for Full Stack Engineers

Powering modern cloud applications, SaaS platforms, and enterprise digital transformation across global tech giants.

85%

Companies Seek AI-Powered Developers

Enterprises across SaaS, FinTech, and E-Commerce actively recruit full-stack engineers skilled in AI-assisted developer workflows.

43%

Hiring Growth with AI Integration

Explosive surge in job requisitions for developers capable of building full MERN architectures integrated with AI toolchains.

30%

Developer Productivity Boost

Developers leveraging tools like GitHub Copilot and LLM agents write bug-free code and ship features 30% faster.

Industry Salary Potential in India (AmbitionBox & Glassdoor Benchmarks)

Entry-Level (0 – 2 Years)

₹6 – ₹12 LPA

Target Roles: Junior Full Stack Developer, React Frontend Engineer, Node.js Backend Associate, Web Developer.

Mid-Level (3 – 6 Years)

₹12 – ₹25 LPA

Target Roles: Senior Full Stack Engineer, MERN Stack Architect, Cloud Web Applications Lead, API Engineer.

Senior-Level (7+ Years)

₹25+ – ₹45+ LPA

Target Roles: Lead Software Architect, VP of Engineering, Head of Web Technology, Principal Engineer.

Who Should Pursue This Program?

Aspiring Software Developers

College graduates and students (B.Tech, BCA, MCA, B.Sc) aiming to break into elite product software engineering roles with MERN stack mastery.

Career Switchers from Non-Tech Fields

Professionals from commerce, mechanical, operations, or non-coding backgrounds transitioning into lucrative software development careers.

Entrepreneurs & Startup Founders

Visionary founders wanting to build AI-powered MVPs, web portals, and scalable SaaS applications without relying on expensive external agencies.

Early-Career IT Professionals

Junior developers seeking to upgrade legacy skill sets into modern React.js, Node.js microservices, Docker, and Generative AI pair programming.

THE ECONOMIC TIMES: "Full Stack Web Development combined with Generative AI skills ranks among India's highest-demand hiring tracks in 2026."

GARTNER: "Over 80% of enterprise software development workflows will incorporate generative AI developer tooling by 2026."

Roadmap to Get Your Dream Tech Job

A step-by-step competency ladder transforming aspiring coders into enterprise-ready full-stack software engineers.

1

Core Programming, DSA & Logic Building

Weeks 1 – 8 (Months 1–2)

Master programming fundamentals in Java / JavaScript, algorithmic problem solving, linear data structures, recursion, time-space complexity, and automated unit testing with JUnit.

2

Modern Responsive Frontend Architecture

Weeks 9 – 16 (Months 3–4)

Build mobile-first responsive layouts using semantic HTML5, modern CSS3 (Flexbox & CSS Grid), Bootstrap 5, Material-UI, and modern asynchronous JavaScript (ES6+ features).

3

Component-Driven React.js & State Management

Weeks 17 – 24 (Months 5–6)

Master React components, JSX, hooks (useState, useEffect, custom hooks), SPA routing with react-router-dom, forms management, and global state handling with Context API and Redux.

4

Server-Side Node.js, Express & RESTful APIs

Weeks 25 – 32 (Months 7–8)

Architect asynchronous backend microservices with Node.js, Express.js routing, custom middleware pipelines, secure JWT token authentication, and comprehensive Postman testing.

5

Cloud Databases, MongoDB Atlas & Gen AI Toolchains

Weeks 33 – 40 (Months 9–10)

Model NoSQL database schemas with Mongoose, integrate MongoDB Atlas cloud clusters, query aggregation, and deploy AI pair programming workflows with GitHub Copilot and Claude.

6

Advanced Software Design, Cloud CI/CD & Placement

Weeks 41 – 48 (Months 11–12)

Implement Redis caching, software design patterns, Docker containerization, AWS cloud deployment, GitHub portfolio presentation, and FAANG whiteboard mock interviews.

The CAISEN Immersive Learning Cycle

1. STUDY

Live masterclasses & 1:1 expert mentoring with 24x7 recordings.

2. ATTEMPT

Daily timed coding drills, component builds & API exercises.

3. MAKE

Build live production web applications deployed to the cloud.

4. REVISE

Peer code reviews, performance audits & automated test suites.

5. TEST

Mock whiteboard rounds before senior engineering leaders & FAANG juries.

Curriculum Blueprint: Month 1 & 2

Web foundations, responsive UX architecture, modern JavaScript, and component-driven React.js.

Month 1: Web Foundations, Responsive UX & Modern JavaScript

Weeks 1 – 12 | 120 Contact Hours

Core Theoretical & Applied Topics

- HTML5 Architecture: Semantic tags, structural hierarchy, accessibility (a11y), forms, inputs, SEO tags
- CSS3 Styling & Layout: Box model (margin/padding/border), Flexbox alignment, CSS Grid, positioning
- Responsive Design: Mobile-first media queries, fluid typography, transitions, transforms, CSS animations
- Advanced UI Customization: CSS variables, custom typography, dark mode toggling, Bootstrap 5 & Material-UI
- Modern JavaScript (ES6+): Variables, data types, closures, arrow functions, destructuring, spread/rest
- Asynchronous JS & DOM: DOM manipulation, event listeners, bubbling, Promises, async/await, Fetch API

Guided Laboratory Practical & Takeaways

- **Lab 1:** Pixel-perfect responsive landing page with semantic HTML5 and modern CSS Grid/Flexbox
- **Lab 2:** Interactive dashboard with dynamic DOM manipulation, dark mode, and local storage state
- **Lab 3:** Asynchronous web application fetching third-party REST APIs with debounce search
- **Competency:** Mobile-first layout engineering, DOM manipulation, asynchronous programming

Milestone Capstone 1: Responsive E-Commerce Product Showcase & Interactive Filter Engine

A modern, mobile-first web storefront engineered with semantic HTML5, CSS Grid, and vanilla ES6+ featuring real-time client-side search, multi-category dynamic filters, and persistent shopping cart local storage.

Month 2: Frontend Engineering with React.js & AI Tooling

Weeks 13 – 24 | 120 Contact Hours

Core Theoretical & Applied Topics

- React Architecture: Virtual DOM, JSX syntax, component hierarchy, props, conditional rendering
- Hooks & State Management: useState, useEffect, useRef, useMemo, useCallback, custom reusable hooks
- Forms & Validation: Controlled vs uncontrolled components, React Hook Form, schema validation with Yup
- SPA Client-Side Routing: react-router-dom v6, nested dynamic routes, URL parameters, protected routes
- API Integration & Global State: Axios HTTP client, Context API, Redux Toolkit slices, global state caching
- Gen AI for Frontend: AI-driven UI wireframing, code generation with GitHub Copilot, automated test generation

Guided Laboratory Practical & Takeaways

- **Lab 4:** Multi-page React application with dynamic routing, lazy loading, and custom theme providers
- **Lab 5:** Production-grade data table with server-side pagination, sorting, and inline editing
- **Lab 6:** AI-assisted component refactoring and automated unit test authoring with Jest & RTL
- **Competency:** Component-driven UI architecture, complex state management, SPA routing

Milestone Capstone 2: Skill Bridge – Interactive EdTech Learning & Assessment Portal

A full-featured educational single-page application built with React.js and Context API, featuring course catalog discovery, interactive video player components, student quiz modules, and real-time progress tracking.

Curriculum Blueprint: Month 3 & Architecture

Backend Node.js microservices, MongoDB cloud databases, Gen AI integration, and production DevOps.

Month 3: Node.js Backend, Cloud Databases, Gen AI & DevOps

Weeks 25 – 48 | 240 Contact Hours

Node.js Microservices & Cloud Databases

- Node.js Architecture: Event-driven runtime, non-blocking I/O, npm package ecosystem, modules
- Express.js Framework: RESTful API design, route modularization, custom middleware, error handlers
- MongoDB & Mongoose: Schema modeling, validation, subdocuments, indexing, aggregation pipelines
- Authentication & Security: Password hashing with bcrypt, JWT token authentication, RBAC, CORS
- File Uploads & Third-Party APIs: Cloudinary image uploads, Multer middleware, SendGrid email APIs
- API Documentation & Testing: Swagger/OpenAPI specifications, Postman automated test suites

Gen AI, Cloud Deployment & Placement Sprints

- Generative AI in Production: Integrating OpenAI/Claude APIs, streaming responses, AI assistants
- Performance & Caching: Redis in-memory caching, database query optimization, rate limiting
- Cloud DevOps: Docker containerization, GitHub Actions CI/CD pipelines, deploying on AWS / Vercel
- Software Design Patterns: MVC pattern, factory functions, separation of concerns, microservices
- FAANG Technical Sprints: Whiteboarding algorithms, full-stack live coding, system design rounds
- SDE Career Defense: Behavioral STAR framework, GitHub code audits, resume ATS optimization

Milestone Capstone 3: Campus Connect – Cloud-Native Community & Event Management Platform

An end-to-end cloud platform featuring React.js frontend, Express.js REST API, MongoDB database, JWT authentication, real-time WebSocket messaging, and automated cloud CI/CD deployment on AWS.

Industry Standard Full-Stack & AI Engineering Stack

Frontend Technologies & Libraries

- React.js & Next.js Frameworks
- HTML5, CSS3, JavaScript (ES6+)
- Bootstrap 5, Tailwind CSS, Material-UI
- Webpack, Vite, Babel, npm / yarn

Backend & Cloud Databases

- Node.js & Express.js Framework
- MongoDB Atlas & Mongoose ORM
- RESTful APIs, WebSockets & JWT
- Postman, Swagger & Redis Caching

Gen AI & DevOps Tooling

- GitHub Copilot, ChatGPT & Claude
- Git, GitHub & GitHub Actions CI/CD
- Docker Containers & AWS Cloud Services
- Jest, React Testing Library, ESLint

Certification Alignment: Fully prepares candidates for EC–Council Certified Secure Software Developer, Google Cloud Associate Cloud Engineer, and AWS Certified Developer Associate credentials.

MERN & AI Ready

Industry-Ready Project Portfolio

Production-grade full-stack web applications and AI-augmented software systems built for enterprise scale.

Project 1: Enterprise Microservices SaaS Platform & AI Collaborative Workspace

Next.js 14 + NestJS + PostgreSQL Prisma + Redis Streams

Business Problem: Modern enterprise productivity platforms require real-time collaborative document editing, granular role-based access control (RBAC), and low-latency synchronization across distributed teams.

Next.js App Router
(React 18 SSR)



NestJS Microservices
& API Gateway



Redis Streams &
WebSocket Sync



PostgreSQL Prisma
& AWS S3 Storage

Deliverable: Production-grade multi-tenant SaaS application with operational transformation / CRDT real-time sync, JWT/OAuth2 RBAC security, automated Docker containerization, and AWS ECS Fargate deployment.

Project 2: Real-Time High-Concurrency Event Streaming & Distributed Messaging Infrastructure

React 18 + Fastify + Kafka / Redis PubSub + MongoDB Sharded

Business Problem: Large-scale campus community networks experience extreme traffic spikes during event announcements, requiring sub-50ms message broadcast delivery across 50,000+ active WebSocket sessions.

React 18 Client
& Socket Worker



Fastify Ingestion
& Auth Gateway



Redis Pub/Sub
Cluster Broker



Sharded MongoDB
& Notification Engine

Deliverable: Distributed messaging and ticketing engine supporting 50,000 concurrent live connections, idempotency key transaction handling, Cloudinary asset pipelines, and real-time administrative moderation dashboards.

Project 3: High-Throughput Omni-Channel E-Commerce Engine & AI Recommendation Microservice

MERN Stack + Razorpay Webhooks + Redis Redlock + Vector Search

Business Problem: High-velocity retail brands require resilient flash-sale checkout pipelines handling 10,000 requests/second with distributed stock reservation, automated payment reconciliation, and real-time personalized product recommendations.

Edge Next.js
Storefront



Redis Redlock
Distributed Cart



Razorpay & Stripe
Webhook Ingest



Vector AI Cross-Sell
& Recommendations

Deliverable: Production e-commerce engine with Redlock distributed locking for zero stock over-selling, automated webhook payment settlement, hybrid AI vector recommendation microservice, and Prometheus telemetry.

Industry-Recognized Certifications

4 official credentials validating your full-stack software engineering, cloud architecture, and secure coding expertise to global recruiters.



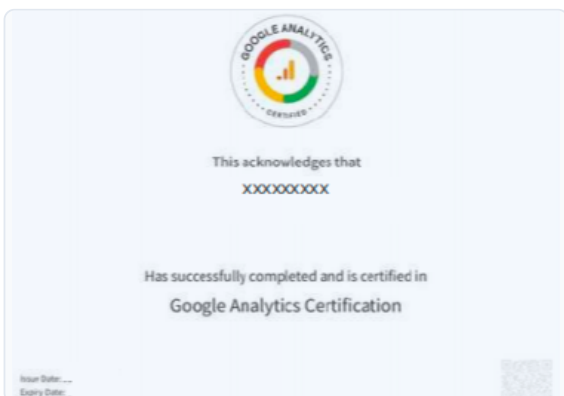
Winnovation Master Certificate in Full Stack

Awarded on successful completion of 48 weeks of intensive 1-year training, 15+ production web applications, and jury defense of all 3 milestone capstones. Features verified QR code.



Executive Software Developer Credential

ANSI-accredited international certification validating secure software development lifecycles, web vulnerability prevention, and secure API coding standards.



Google Cloud Associate Developer Credential

Industry gold standard credential verifying proficiency in scalable cloud applications, containerized web services, microservices design, and optimal cloud deployments.



Cloud Infrastructure & Systems Practitioner

Official Amazon Web Services credential validating foundational knowledge of cloud databases, serverless compute (Lambda), API Gateways, and scalable architectures.

Curriculum Endorsed & Co-Accredited By Global Learning Standards

Google Cloud Recognized • AWS Academy Partner • NASSCOM FutureSkills Prime • EC-Council Accredited • OpenJS Foundation Aligned

Learn from Industry Experts

Seasoned full-stack architects, cloud backend leads, and frontend specialists guiding you through every sprint, code review, and project defense.

**Nisha Pal****5+ Yrs Exp****Senior Full Stack Web Developer & UI Lead**

Specializes in modern React.js architecture, component lifecycle, Next.js server components, and responsive mobile-first UI engineering.

React.js

Frontend UI

Modern JavaScript

**Abhishek Mishra****8+ Yrs Exp****Senior Software Architect & AI Systems Lead**

Expert in Node.js microservices, asynchronous architectures, RESTful API design, and integrating Generative AI coding workflows.

Node.js / Express

Gen AI Tools

RESTful APIs

**Surekha Kanwar****10+ Yrs Exp****Senior Systems Engineer & Data Architecture Lead**

Directs cloud database modeling in MongoDB Atlas, schema validation with Mongoose, indexing optimization, and high-throughput queries.

MongoDB Atlas

Schema Design

Database Modeling

**Saurabh Dwivedi****5+ Yrs Exp****Senior Cloud Computing & DevOps Specialist**

Cloud architect managing Docker containerization, AWS cloud deployments, serverless functions, and automated CI/CD build pipelines.

AWS Cloud

Docker & CI/CD

Cloud Architecture

**Arun Kumar****5+ Yrs Exp****Senior Full Stack & Real-Time Systems Engineer**

Specializes in real-time WebSockets, event-driven architectures, third-party payment gateway APIs, and automated integration testing.

WebSockets

Payment APIs

Integration Testing

**Priyanka Saini****7+ Yrs Exp****Senior Web UX & Frontend Framework Specialist**

Focuses on responsive UX design principles, CSS Grid/Flexbox layouts, Material-UI design systems, and web accessibility standards.

Material-UI

CSS3 / Grid

Responsive UX

**Pavneet Kaur****5+ Yrs Exp****Senior SDE Technical Interview & Career Coach**

Career strategist conducting mock technical interviews, GitHub code portfolio audits, and behavioral STAR interview preparations.

Mock Interviews

GitHub Defense

SDE Careers

**Diksha Sachan****8+ Yrs Exp****Head of Technical Curriculum & Problem Solving**

Oversees agile development sprints, component state modeling with Redux Toolkit, and industry capstone project execution.

Redux Toolkit

Agile Sprints

State Management

**Prince Pal****5+ Yrs Exp****Enterprise Web Security & Governance Lead**

Ensures enterprise application security, JWT authentication protocols, CORS configuration, and DPDP Act 2023 compliance.

JWT Security

Web Governance

DPDP Act 2023

1:1 Dedicated SDE Mentorship & Live Code Reviews

Weekly personalized office hours, pull request code reviews, and mock technical whiteboard interviews tailored to your target software role.

50+ Hours Live Mentorship

Student Success Stories

Hear how Winnovation graduates cracked elite product software engineering roles and launched successful tech careers.

**Syed Vernice Kashani****B.Tech (CSE)****Full Stack Web Developer**

"Learning Full Stack Web Development at Winnovation has been a turning point in my career. Thanks to Nisha Pal Ma'am, who made complex topics so easy to understand and guided us with patience throughout the program. I am now confidently working on live projects in my new role."

**Prabjyot Singh****B.Tech (CSE)****Cloud & Full Stack Engineer**

"I am truly grateful to Winnovation for providing an in-depth learning experience in modern web technologies and cloud integration. The practical MERN training and mentor feedback boosted my skills and helped me secure a high-package opportunity."

**Rabinder Singh****Govt. Technical Trainer****Senior Web Development Trainer**

"Winnovation has been a game-changer in my professional upskilling. The structured training programs, supportive mentors, and live full-stack projects ensured I mastered advanced React, Node.js, and cloud deployments."

**Suhaib Muzaffar****B.Tech (CSE)****MERN Stack Developer**

"I sincerely thank Winnovation and the mentors for equipping me with practical knowledge in modern full-stack development and AI-assisted workflows. The hands-on training and placement support gave me complete confidence."

**Lakshay Suryavanshi****RA at NextX Tech****Full Stack Software Associate**

"The training at Winnovation bridges the gap between academics and real industry requirements. Mentors gave us exposure to production codebases and real case studies, and the placement support team ensured I got the ideal opportunity."

**Aryan Choudhary****B.Tech (CSE)****Junior Full Stack Engineer**

"The practical training I received in React, Node.js, and MongoDB from Winnovation played a key role in shaping my career path. Their guidance and interview preparation prepared me to succeed in product company interviews."

100% Placement Record: Highest Fresher Package: ₹18 LPA | Average Starting CTC: ₹7.5 LPA **Verified Alumni Network**

Backed by 100+ Hiring Partners

Leading software product enterprises, fast-growing tech startups, and global multinationals recruiting Winnovation developers.

**SAMSUNG****SOTI****vivo****SOPHOS****FORTRA****Emcure****we360.ai****Medtronic****FORTINET****100+****Active Corporate Recruiters**

Product Tech Giants, Unicorns &
Global IT MNCs

15+**Interview Drives Annually**

Exclusive On-Campus & Direct Hiring
Drives

100%**Placement Assistance**

GitHub reviews, mock whiteboards &
SDE interviews

Holistic Guidance & Admissions

The complete CAISEN support framework powering your journey from aspiring coder to elite software engineer.

CAISEN 10 Core Competencies for Full-Stack & Software Excellence

Frontend Architecture

Backend Microservices

Database Modeling

REST & GraphQL

AI Pair Programming

Clean Code Architecture

System Scalability

Cloud DevOps

Critical Thinking

FAANG Whiteboarding

100% SDE Placement Support

Dedicated placement cell conducting exclusive hiring rounds with product tech companies until successful career placement.

AI & GitHub Portfolio Building

ATS-compliant tech resume architecture, GitHub repository optimization, and production code audits by senior architects.

Rigorous Mock Whiteboards

Simulated 1-on-1 technical whiteboard rounds, live problem-solving defense, and behavioral STAR interviews before SDE heads.

Lifetime Code Repository Access

Unlimited access to high-definition recorded masterclasses, project source codes, and continuously updated course materials.

Personal Tech Mentorship

Individual career mentoring, technical project roadmap guidance, and personal coaching to overcome technical bottlenecks.

24x7 Coding Community & TAs

Dedicated Discord and WhatsApp peer discussion channels with active teaching assistants resolving code queries within minutes.

The Winnovation Technology Ecosystem

Full Stack Web Development

Data Structures & Algorithms (DSA)

Data Science & AI/ML

Data Analytics & BI

Digital Marketing & Growth

Cloud Computing & DevOps

Internet of Things (IoT)

Cyber Security & CEH

Robotic Process Automation (RPA)

Ready to Master Full Stack Web Development?

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Campus Headquarters: 1157, i-Thum Galleria, Alpha 2, Greater Noida, Uttar Pradesh - 201308

ADMISSIONS OPEN

Batch Size: 25 Students
Max

APPLY TODAY