ABOUT

Fintech, AI, and Blockchain Course

This course introduces the fusion of Blockchain Technology, Financial Technology (Fintech), and Artificial Intelligence (AI), all of which are revolutionizing the financial sector and are in high demand. Students will learn the basics of these technologies and their broad applications in the Fintech industry, including how Blockchain is leveraged to develop innovative financial solutions and how AI enhances decision-making and efficiency.

India is aiming to enable "Made in India" blockchain technology for global use by 2027 while achieving convergence across blockchain, Internet of Things, cloud, and Artificial Intelligence, collectively called the "BICA Stack."

WHY FINTECH, AI & BLOCKCHAIN?

Asia Pacific Market Accounted largest share in the Global Market

75.80 % CAGR
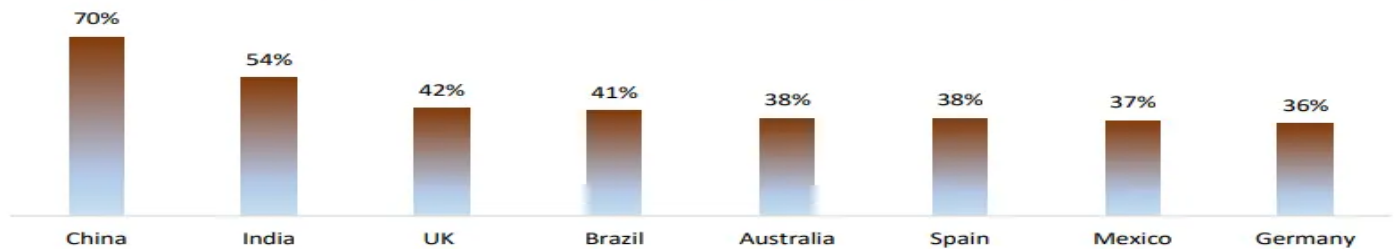Global Market to grow at a CAGR of 75.80 % during 2024-2030

TOP USE CASES FOR BLOCKCHAIN TECHNOLOGY in 2022 in %

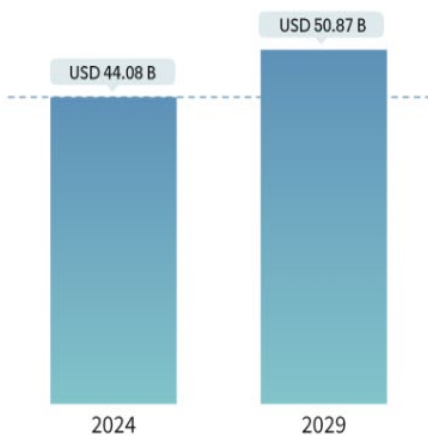|	
Others	47%
Indentity Management	85%
Asset good management	9%
Trade Finance and post trade	10%
Lot Lineage/Provenance	11%
Cross Border Payments & Settlement	16%

FinTech Blockchain Market Size

2023	2030
USD 6.21	USD 322.27

Market Size in **Billion**

Share of FinTech users in the digitally active population(2022)

China	India	UK	Brazil	Australia	Spain	Mexico	Germany
70%	54%	42%	41%	38%	38%	37%	36%

Source: https://www.maximizemarketresearch.com/market-report/fintech-blockchain-market/13770/

AI In Fintech Market
Market Size in USD Billion
CAGR 2.91%

USD 50.87 B
USD 44.08 B
2024 2029

Source : Mordor Intelligence

Study Period	2019 - 2029
Market Size (2024)	USD 44.08 Billion
Market Size (2029)	USD 50.87 Billion
CAGR (2024 - 2029)	2.91 %
Fastest Growing Market	Asia-Pacific
Largest Market	North America

Major Players

narrative science   Comply Advantage

intel   amazon web services   IBM

*Disclaimer: Major Players sorted in no particular order

Blockchain provides data immutability and security, AI offers predictive analytics and automation, and Fintech creates new financial products and services. This synergy is expected to enhance over 40 million jobs globally by 2030, according to PwC's "Time for Trust" report.

Source: https://www.mordorintelligence.com/industry-reports/ai-in-fintech-market

Driving Factors Behind the Rising Demand for Blockchain, AI & Fintech Professionals

The rising demand for Blockchain, AI, and Fintech professionals is driven by technological
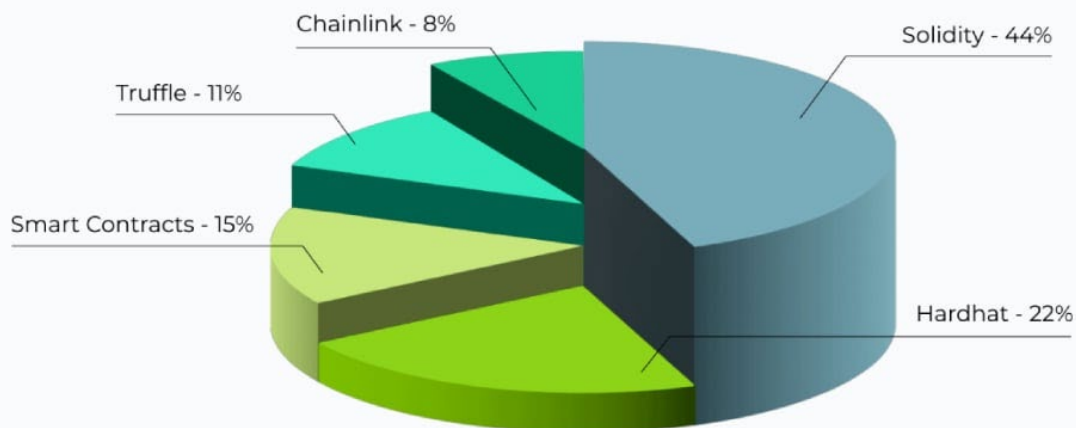

advancements, economic growth, and digital transformation in India. Blockchain enhances security and transparency, while AI improves efficiency in finance. High earning potential makes these fields attractive, with blockchain experts earning significantly more than their peers. Future job growth is substantial, with NASSCOM predicting 800,000 new jobs in India's CryptoTech industry by 2030 and Gartner forecasting the global blockchain market to reach $67.4 billion. This underscores the critical need for a skilled workforce in these technologies.


Top 5 most in-demand Blockchain skills

- Chainlink - 8%
- Truffle - 11%
- Smart Contracts - 15%
- Solidity - 44%
- Hardhat - 22%

Source: DevSkiller Digital & IT Skills Report 2023

FOUNDATION FOR INNOVATION
AND TECHNOLOGY TRANSFER
भारतीय प्रौद्योगिकी संस्थान दिल्ली
Indian Institute of Technology Delhi

EMPLOYMENT & SALARY TRENDS

Blockchain, AI, and Fintech developers are now highly sought-after. Their skills are transferable across multiple industries. In 2021, the US national salary average for blockchain developers was $175,000, compared to $77,000 for software developers. The demand for these specialists fuels salary growth as businesses adopt these technologies. In 2021, the US-national salary average for blockchain developers was $175,000, compared to the $77,000 average for software developers.
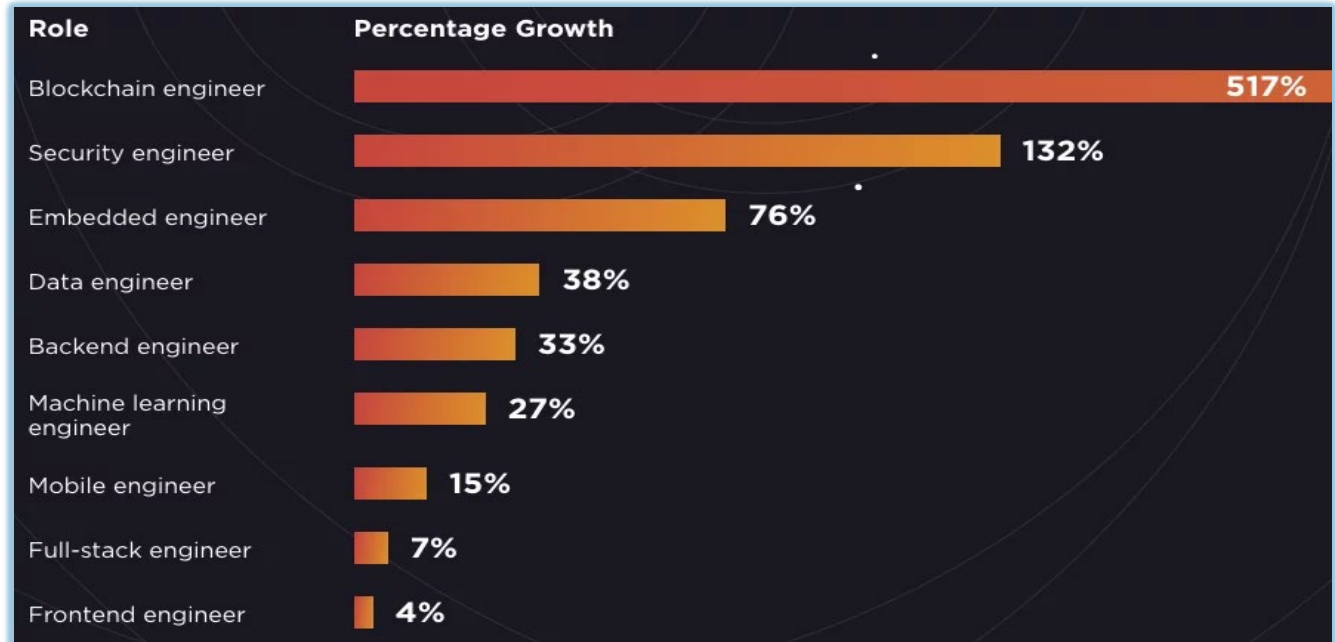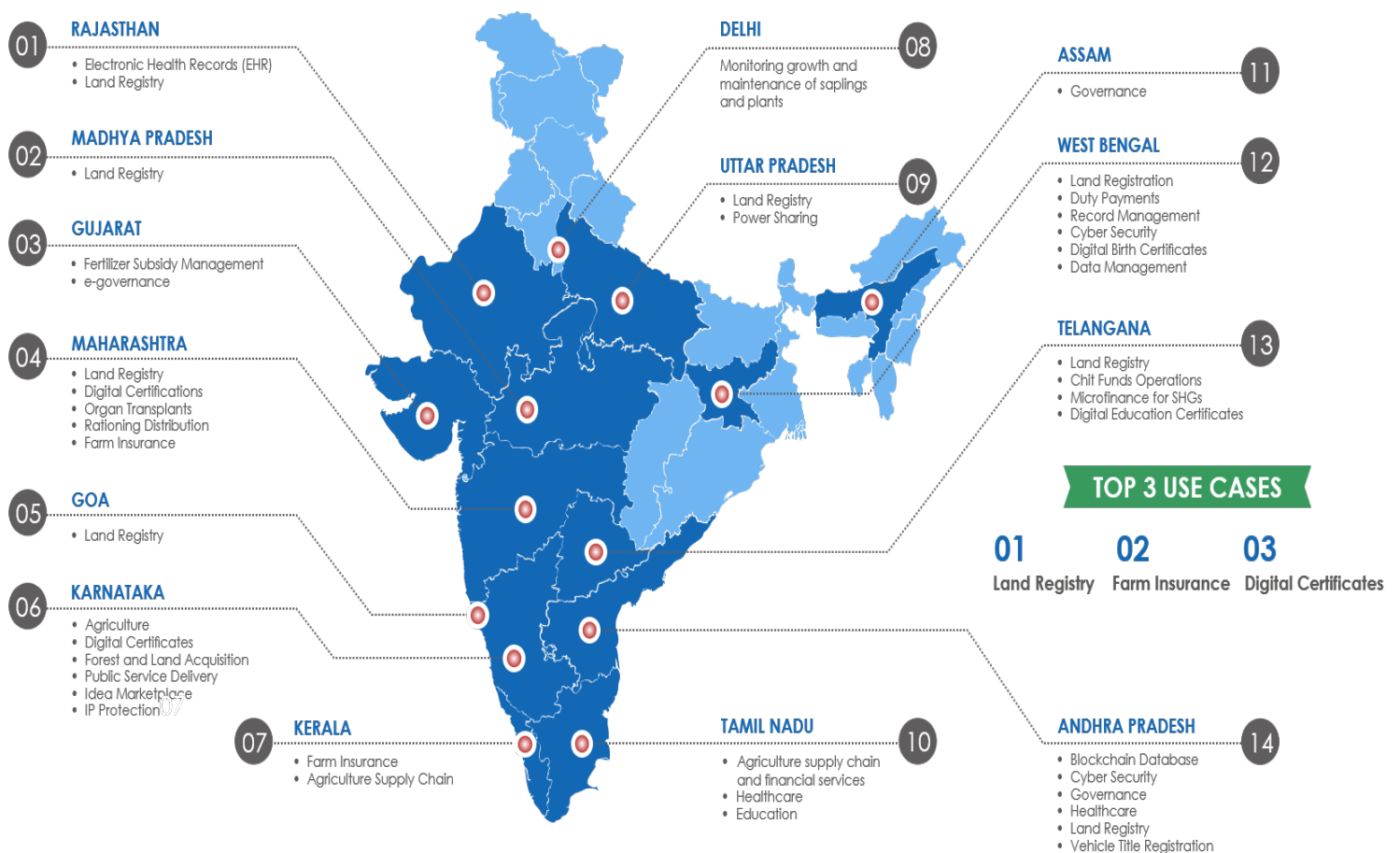
AI Professionals Salary Trends in India
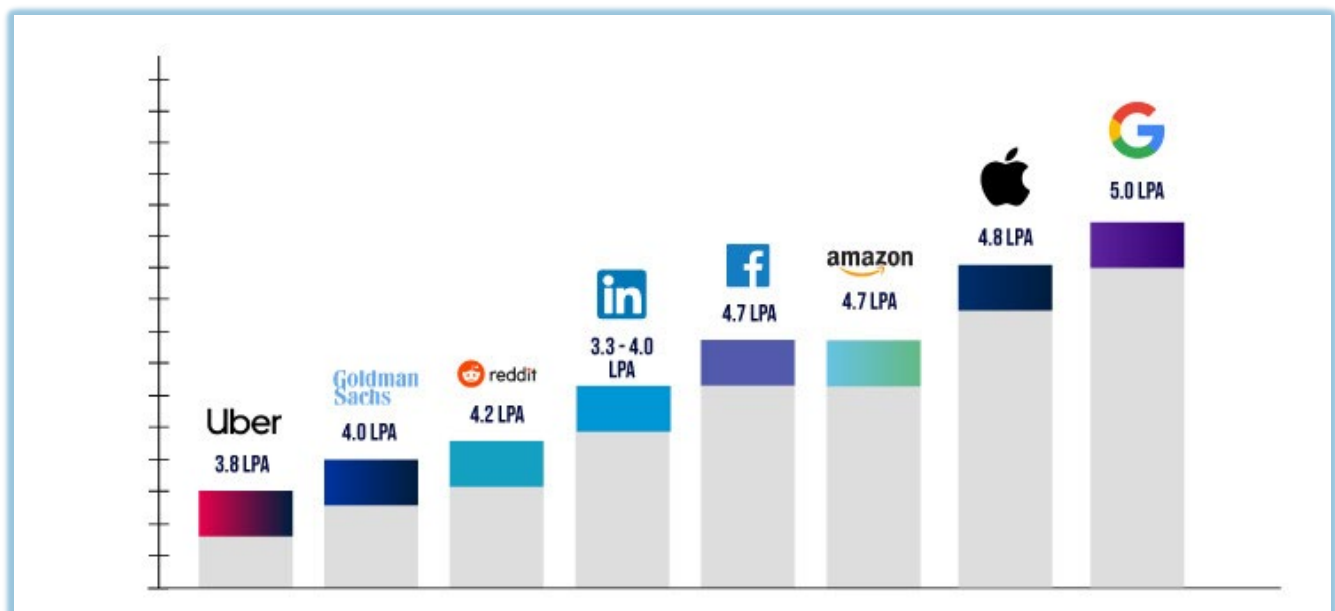
FINTECH IN INDIA

In India, financial institutions use blockchain to streamline processes, enhance security, and reduce costs. The Reserve Bank of India (RBI) is exploring blockchain for digital currency, while private banks like ICICI and HDFC use it for cross-border payments and KYC processes. AI is being utilized to enhance customer service through chatbots and predictive analytics, further integrating these technologies into India's fintech sector.

01 RAJASTHAN
- Electronic Health Records (EHR)
- Land Registry

02 MADHYA PRADESH
- Land Registry

03 GUJARAT
- Fertilizer Subsidy Management
- e-governance

04 MAHARASHTRA
- Land Registry
- Digital Certifications
- Organ Transplants
- Rationing Distribution
- Farm Insurance

05 GOA
- Land Registry

06 KARNATAKA
- Agriculture
- Digital Certificates
- Forest and Land Acquisition
- Public Service Delivery
- Idea Marketplace
- IP Protection

07 KERALA
- Farm Insurance
- Agriculture Supply Chain

08 DELHI
Monitoring growth and maintenance of saplings and plants

09 UTTAR PRADESH
- Land Registry
- Power Sharing

10 TAMIL NADU
- Agriculture supply chain and financial services
- Healthcare
- Education

11 ASSAM
- Governance

12 WEST BENGAL
- Land Registration
- Duty Payments
- Record Management
- Cyber Security
- Digital Birth Certificates
- Data Management

13 TELANGANA
- Land Registry
- Chit Funds Operations
- Microfinance for SHGs
- Digital Education Certificates

14 ANDHRA PRADESH
- Blockchain Database
- Cyber Security
- Governance
- Healthcare
- Land Registry
- Vehicle Title Registration

TOP 3 USE CASES

01 Land Registry

02 Farm Insurance

03 Digital Certificates

FINTECH ECOSYSTEM

These technologies are not just for coders and developers. Marketing professionals can use blockchain for transparent digital advertising, salespersons can leverage blockchain-based loyalty programs, and designers can create user-friendly interfaces for blockchain and AI applications. Financial analysts use AI-driven data analytics for investment strategies, and legal professionals specialize in blockchain regulations and smart contracts. This course opens up diverse career opportunities within the fintech, AI, and blockchain industries.

THE FINTECH ECOSYSTEM

Source: Company Websites, BI Intelligence

CONTENT AND CURRICULUM

The program combines traditional principles of commerce and finance with cutting-edge technological advancements, providing students with a unique blend of expertise that is highly relevant in the modern financial landscape. Fintech, short for financial technology encompasses a wide range of digital innovations that are reshaping the financial industry, including the use of AI, online banking, payment systems, robo-advisors, and peer-to-peer lending. In parallel, blockchain technology has emerged as a disruptive force, revolutionizing how data is stored, and transactions are verified, particularly through cryptocurrencies like Bitcoin and Ethereum. The details of the course content and curriculum are provided below:

COURSE OBJECTIVES:

1. Describe the key concepts and components of Fintech and its significance in reshaping financial services.
2. Analyze the impact of emerging technologies, such as blockchain, AI, and big data, on the financial sector.
3. Evaluate the regulatory and ethical considerations in Fintech.
4. Identify various Fintech sectors and their applications.
5. Discuss the future trends and potential challenges in the Fintech industry

PREREQUISITES:

1. Students of Pradhan Mantri Centers of Excellence and Autonomous Colleges, Higher Education MP.
2. Basic understanding of mathematics.
3. Familiarity with at least one programming language is beneficial but not mandatory.
4. Access to a computer with internet connectivity for programming assignments and project work.

LEARNING OUTCOMES:

Upon completing this course, students should be able to:

1. Understand the key concepts of Fintech.
2. Identify and evaluate different fintech solutions
3. Apply fintech to solve real-world business solutions
4. Demonstrate proficiency in AI programming languages and tools. Develop AI-driven solutions for various applications.

5. Build simple Blockchain Applications

COURSE STRUCTURE:

S. NO	MODULES	TOPICS COVERED	DURATION (HOURS)
1	Introduction to Fintech: Fintech Sectors and Applications	Fintech vs. Traditional Finance; Payments and Digital Currencies; Peer-to-Peer Lending and Crowdfunding; Robo-Advisors and Wealth Management; Insurtech and Digital Insurance; Case Studies and Real-World Applications	10
2	Emerging Technologies in Finance	Blockchain and Distributed Ledger Technology; Artificial Intelligence and Machine Learning; Big Data Analytics in Financial Services; Internet of Things (IoT) and Wearable Finance; The Rise of Regtech and SupTech	10
3	Cryptography and Security	Cryptographic Hash Functions; Digital Signatures and Public/Private Key Cryptography; Merkle Trees and their Role in Blockchain; Security Considerations and Attacks on Blockchains; Secure Key Management and Wallets	10
4	Smart Contracts and Development (Labs)	Introduction to Smart Contracts; Ethereum and Solidity Programming Language; Creating and Deploying a Basic Smart Contract; Interacting with Smart Contracts; Use Cases of Smart Contracts	20
5	Introduction to AI & ML	AI and ML Fundamentals	5
6	AI Programming Languages and Tools	Python for AI	5
7		Capstone Project	20
8		Presentations and Demo	10

ABOUT FITT IIT DELHI

Foundation for Innovation and Technology Transfer (FITT) at IIT Delhi has been the vanguard of knowledge transfer activities from academia since its inception in 1992.This techno-commercial organization from academia is counted among the successful such organizations. FITT provides superior program management services and is steadily increasing its operational landscape. The varied roles ofFITT can be seen in enabling innovations and technopreneurship, business partnerships, technology development, consultancy, collaborative R&D, technology commercialization, development programs, corporate memberships etc. These rolesare necessitated by the key agenda of the Foundation to showcase the Institute's "intellectual ware" to industry, and thereby unlock it's knowledge base and inculcate industrial relevance in teaching and research at IIT Delhi.

IIT Delhi is India's eminent academic and research institution. It co-develops a range of training programs for college-level to working professionals and also on emerging areas like Blockchain, AI/ML, IoT, AR/VR & Cybersecurity. The CoE in IIT Delhi has been set up to conduct deep research and product development in these areas, particularly for critical infrastructures like Waterways, Smart Cities, Railways and Energy.

ENROLLMENT PROCESS:

Please visit www.highereducation.mp.gov.in

ENROLL NOW