Science & Technology · GS - III

Examine the opportunities and challenges associated with private investment in India's artificial intelligence ecosystem. Suggest measures to strengthen India's global competitiveness in AI.

EXAM YEAR	PAPER	SUBJECT
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MARKS	WORD LIMIT
10	~150 words

Answer Hint

Private equity and venture capital; skilled workforce and digital infrastructure; healthcare and fintech applications; research and development; data privacy and algorithmic bias; computing infrastructure; responsible AI governance

Model Answer

Introduction

Artificial intelligence is emerging as a strategic technology shaping economic productivity, public services and global competitiveness. Growing private investment in Indian AI startups reflects confidence in the country's talent pool, digital infrastructure and expanding technology market.

Opportunities

Innovation and Entrepreneurship: Private investment enables startups to develop AI products, attract specialised talent and scale innovative solutions.

Sectoral Transformation: AI can improve diagnostics in healthcare, fraud detection in fintech, agricultural decision-making and automation in manufacturing and enterprise services.

Employment and Competitiveness: A stronger AI ecosystem can generate skilled jobs, attract foreign investment and help Indian firms participate in global technology value chains.

Key Challenges

India faces constraints in advanced computing infrastructure, high-quality datasets, research funding and commercialisation of indigenous innovations. Data privacy, algorithmic bias, cybersecurity threats and possible job displacement also require attention.

Way Forward

India should strengthen domestic research, expand affordable computing access, improve AI education and support collaboration between universities, startups and industry. Effective implementation of data protection and responsible AI safeguards is essential to build public trust.

Conclusion

Private investment can accelerate India's AI ambitions, but lasting competitiveness requires sustained research, inclusive innovation, reliable infrastructure and responsible governance.

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