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AI Automation Testing Market Forecasts to 2034 – Global Analysis By Component (Testing Type, Service and Electric), Deployment, Organization Size, Technology, Application End User and By Geography

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Abstracts

According to Stratistics MRC, the Global AI Automation Testing Market is accounted for $48.44 billion in 2026 and is expected to reach $187.46 billion by 2034 growing at a CAGR of 18.4% during the forecast period. AI Automation Testing involves the use of artificial intelligence and machine learning to enhance software testing processes. It enables automated test case generation, execution, and analysis, improving efficiency and accuracy. AI algorithms identify patterns, predict defects, and optimize testing, reducing manual intervention. This approach accelerates the testing lifecycle, ensures comprehensive coverage, and enhances the quality of software releases. The technology streamlines testing efforts, identifies vulnerabilities, and contributes to overall software reliability, meeting the demands of modern software development practices.

Market Dynamics:

Driver:

Accelerated software development

The need for rapid and continuous releases requires efficient and timely testing. AI in automation testing expedites the testing lifecycle, offering quick identification of defects, increased test coverage, and early bug detection. This synergy ensures that applications are thoroughly validated, aligning with the accelerated development pace. As organizations prioritize speed and quality in software delivery, the market

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experiences heightened adoption, playing a pivotal role in maintaining agility, reducing time-to-market, and enhancing overall software reliability.

Restraint:

High implementation cost

Organizations, particularly smaller ones, may be deterred by the substantial upfront expenses involved in acquiring AI tools, training personnel, and establishing the necessary infrastructure. This financial barrier limits the accessibility of advanced testing technologies, hindering broader adoption. The perceived financial burden could lead businesses to opt for traditional testing methods, slowing down the market expansion.

Opportunity:

Adoption

As software ecosystems become increasingly complex with varied devices, platforms, and configurations, AI-driven testing ensures flexibility and scalability. This adaptability addresses the challenges posed by diverse testing scenarios, leading to improved efficiency and comprehensive test coverage. Organizations seeking agile and responsive testing solutions value the capability to handle dynamic environments.

Threat:

Shortage of skilled professionals

The lack of experts proficient in both testing and AI impedes the successful implementation and utilization of advanced testing technologies. Companies face difficulties in harnessing the full potential of AI-driven testing, leading to delayed or suboptimal adoption. This scarcity hampers the growth of AI Automation Testing solutions, limiting their impact on improving testing efficiency and overall software quality.

Covid-19 Impact

While the demand for automated testing solutions increased due to the accelerated shift towards digital transformation, budget constraints and resource limitations slowed down

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adoption. Remote working conditions also highlighted the importance of robust software testing, driving interest in AI-driven testing solutions. The pandemic created a dual effect of increased demand for efficient testing solutions and challenges in implementation, resulting in a nuanced impact on the AI Automation Testing market.

The machine learning segment is expected to be the largest during the forecast period

The machine learning segment is estimated to have a lucrative growth, because the machine learning algorithms enable intelligent test script generation, dynamic test case prioritization, and adaptive test maintenance. This results in more effective identification of defects and improved testing coverage. Additionally, machine learning aids in predicting potential issues, reducing false positives, and automating repetitive testing tasks boosting the market growth.

The mobile-based segment is expected to have the highest CAGR during the forecast period

The mobile-based segment is anticipated to witness the highest CAGR growth during the forecast period, as it enhances testing efficiency, ensuring seamless functionality across diverse mobile platforms. The surge in mobile app development demands rigorous testing, and mobile-based AI solutions provide quicker, more accurate testing processes. As mobile technologies continue to evolve, the integration of AI automation testing becomes imperative for businesses to ensure robust and reliable mobile applications, meeting the dynamic expectations of end-users

Region with largest share:

North America is projected to hold the largest market share during the forecast period driven by the notable expansion of automated testing. As mobile apps become more functional, AI regression testing is being utilized more and more, which is impacting AI-enabled testing in North America. Furthermore, because of the existence of technology suppliers, the United States is anticipated to develop greatly throughout the projection period. The expansion of this market is driven by factors such as growing urbanization, evolving lifestyles, increased disposable income, and enhanced technology.

Region with highest CAGR:

Asia Pacific is projected to have the highest CAGR over the forecast period, owing to rising R&D spending, rising demand for automated testing solutions, and the

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introduction of new products. To support market expansion, Asia Pacific nations like China, Japan, India, and others are developing and introducing new platforms and goods. Additionally a possible upsurge in demand for automated and effective telecom infrastructure testing and maintenance may lead to a rise in the use of AI-enabled testing technologies in Japan.

Key players in the market

Some of the key players in the AI Automation Testing Market include Apexon, Applitools, Capgemini SE, D2L Corp., Functionize Inc., IBM Corporation, Keysight technologies, Mabl Inc., Micro Focus International Plc, Open Text, Parasoft, Perforce Software In, ReTest GmbH, Sauce Labs Inc., Testim, testRigor, Tricentis and UBS Hainer GmbH

Key Developments:

In December 2023, Apexon, a digital-first technology services company, today announced that Microsoft has named it a Solutions Partner for Data and AI. This prestigious accolade follows the company’s recent achievements in securing the Microsoft Digital and App Innovation, and Infrastructure Solutions Partner designations

In August 2023, Apexon, has expanded its presence in India by setting up a new facility in Ahmedabad. The new delivery center will leverage the rich engineering talent pool in Ahmedabad and India and further strengthen Apexon’s ability to deliver digital and business transformation for its global client base.

In July 2023, Applitools Partners with Sogeti on '2021 State of Artificial Intelligence Applied to Quality Engineering Report. Sogeti will introduce each follow-on section of the full report every two weeks from September to the end of January

Components Covered:

- Testing Type
- Service
- Other Components

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Deployments Covered:

- Cloud
- On-Premise

Organization Sizes Covered:

- Large Enterprises
- Small And Medium-Sized Enterprises

Technologies Covered:

- NLP (Natural Language Processing)
- Machine Learning
- MBTA (Model-Based Test Automation)
- Computer Vision
- Other Technologies

Applications Covered:

- Web-Based
- Mobile-Based

End Users Covered:

- IT & Telecommunication
- Healthcare

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- BFSI
- Government
- Defense And Aerospace
- Energy & Utilities
- Other End Users

Regions Covered:

- North America
  - US
  - Canada
  - Mexico
- Europe
  - Germany
  - UK
  - Italy
  - France
  - Spain
  - Rest of Europe
- Asia Pacific
  - Japan

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China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants

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- Covers Market data for the years 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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Contents

1 EXECUTIVE SUMMARY

2 PREFACE

2.1 Abstract
2.2 Stake Holders
2.3 Research Scope
2.4 Research Methodology
  2.4.1 Data Mining
  2.4.2 Data Analysis
  2.4.3 Data Validation
  2.4.4 Research Approach
2.5 Research Sources
  2.5.1 Primary Research Sources
  2.5.2 Secondary Research Sources
  2.5.3 Assumptions

3 MARKET TREND ANALYSIS

3.1 Introduction
3.2 Drivers
3.3 Restraints
3.4 Opportunities
3.5 Threats
3.6 Technology Analysis
3.7 Application Analysis
3.8 End User Analysis
3.9 Emerging Markets
3.10 Impact of Covid-19

4 PORTERS FIVE FORCE ANALYSIS

4.1 Bargaining power of suppliers
4.2 Bargaining power of buyers
4.3 Threat of substitutes
4.4 Threat of new entrants
4.5 Competitive rivalry

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5 GLOBAL AI AUTOMATION TESTING MARKET, BY COMPONENT

5.1 Introduction
5.2 Testing Type
  5.2.1 Dynamic Testing
    5.2.1.1 Functional Testing
    5.2.1.2 API Testing
    5.2.1.3 Performance Testing
    5.2.1.4 Load Testing
    5.2.1.5 Regression Testing
    5.2.1.6 Security Testing
  5.2.2 Static Testing
5.3 Service
  5.3.1 Professional Services
  5.3.2 Managed Services
5.4 Other Components

6 GLOBAL AI AUTOMATION TESTING MARKET, BY DEPLOYMENT

6.1 Introduction
6.2 Cloud
6.3 On-Premise

7 GLOBAL AI AUTOMATION TESTING MARKET, BY ORGANIZATION SIZE

7.1 Introduction
7.2 Large Enterprises
7.3 Small And Medium-Sized Enterprises

8 GLOBAL AI AUTOMATION TESTING MARKET, BY TECHNOLOGY

8.1 Introduction
8.2 NLP (Natural Language Processing)
8.3 Machine Learning
8.4 MBTA (Model-Based Test Automation)
8.5 Computer Vision
8.6 Other Technologies

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9 GLOBAL AI AUTOMATION TESTING MARKET, BY APPLICATION

9.1 Introduction
9.2 Web-Based
9.3 Mobile-Based

10 GLOBAL AI AUTOMATION TESTING MARKET, BY END USER

10.1 Introduction
10.2 IT & Telecommunication
10.3 Healthcare
10.4 BFSI
10.5 Government
10.6 Defense And Aerospace
10.7 Energy & Utilities
10.8 Other End Users

11 GLOBAL AI AUTOMATION TESTING MARKET, BY GEOGRAPHY

11.1 Introduction
11.2 North America
  11.2.1 US
  11.2.2 Canada
  11.2.3 Mexico
11.3 Europe
  11.3.1 Germany
  11.3.2 UK
  11.3.3 Italy
  11.3.4 France
  11.3.5 Spain
  11.3.6 Rest of Europe
11.4 Asia Pacific
  11.4.1 Japan
  11.4.2 China
  11.4.3 India
  11.4.4 Australia
  11.4.5 New Zealand
  11.4.6 South Korea
  11.4.7 Rest of Asia Pacific

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11.5 South America
11.5.1 Argentina
11.5.2 Brazil
11.5.3 Chile
11.5.4 Rest of South America
11.6 Middle East & Africa
11.6.1 Saudi Arabia
11.6.2 UAE
11.6.3 Qatar
11.6.4 South Africa
11.6.5 Rest of Middle East & Africa

12 KEY DEVELOPMENTS

12.1 Agreements, Partnerships, Collaborations and Joint Ventures
12.2 Acquisitions & Mergers
12.3 New Product Launch
12.4 Expansions
12.5 Other Key Strategies

13 COMPANY PROFILING

13.1 Apexon
13.2 Applitools
13.3 Capgemini SE
13.4 D2L Corp.
13.5 Functionize Inc.
13.6 IBM Corporation
13.7 Keysight technologies
13.8 Mabl Inc.
13.9 Micro Focus International Plc
13.10 Open Text
13.11 Parasoft
13.12 Perforce Software, In
13.13 ReTest GmbH
13.14 Sauce Labs Inc.
13.15 Testim
13.16 testRigor
13.17 Tricentis

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13.18 UBS Hainer GmbH

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List Of Tables

LIST OF TABLES

Table 1 Global AI Automation Testing Market Outlook, By Region (2023-2034) ($MN)
Table 2 Global AI Automation Testing Market Outlook, By Component (2023-2034) ($MN)
Table 3 Global AI Automation Testing Market Outlook, By Testing Type (2023-2034) ($MN)
Table 4 Global AI Automation Testing Market Outlook, By Dynamic Testing (2023-2034) ($MN)
Table 5 Global AI Automation Testing Market Outlook, By Functional Testing (2023-2034) ($MN)
Table 6 Global AI Automation Testing Market Outlook, By API Testing (2023-2034) ($MN)
Table 7 Global AI Automation Testing Market Outlook, By Performance Testing (2023-2034) ($MN)
Table 8 Global AI Automation Testing Market Outlook, By Load Testing (2023-2034) ($MN)
Table 9 Global AI Automation Testing Market Outlook, By Regression Testing (2023-2034) ($MN)
Table 10 Global AI Automation Testing Market Outlook, By Security Testing (2023-2034) ($MN)
Table 11 Global AI Automation Testing Market Outlook, By Static Testing (2023-2034) ($MN)
Table 12 Global AI Automation Testing Market Outlook, By Service (2023-2034) ($MN)
Table 13 Global AI Automation Testing Market Outlook, By Professional Services (2023-2034) ($MN)
Table 14 Global AI Automation Testing Market Outlook, By Managed Services (2023-2034) ($MN)
Table 15 Global AI Automation Testing Market Outlook, By Other Components (2023-2034) ($MN)
Table 16 Global AI Automation Testing Market Outlook, By Deployment (2023-2034) ($MN)
Table 17 Global AI Automation Testing Market Outlook, By Cloud (2023-2034) ($MN)
Table 18 Global AI Automation Testing Market Outlook, By On-Premise (2023-2034) ($MN)
Table 19 Global AI Automation Testing Market Outlook, By Organization Size (2023-2034) ($MN)

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Table 20 Global AI Automation Testing Market Outlook, By Large Enterprises (2023-2034) ($MN)
Table 21 Global AI Automation Testing Market Outlook, By Small And Medium-Sized Enterprises (2023-2034) ($MN)
Table 22 Global AI Automation Testing Market Outlook, By Technology (2023-2034) ($MN)
Table 23 Global AI Automation Testing Market Outlook, By NLP (Natural Language Processing) (2023-2034) ($MN)
Table 24 Global AI Automation Testing Market Outlook, By Machine Learning (2023-2034) ($MN)
Table 25 Global AI Automation Testing Market Outlook, By MBTA (Model-Based Test Automation) (2023-2034) ($MN)
Table 26 Global AI Automation Testing Market Outlook, By Computer Vision (2023-2034) ($MN)
Table 27 Global AI Automation Testing Market Outlook, By Other Technologies (2023-2034) ($MN)
Table 28 Global AI Automation Testing Market Outlook, By Application (2023-2034) ($MN)
Table 29 Global AI Automation Testing Market Outlook, By Web-Based (2023-2034) ($MN)
Table 30 Global AI Automation Testing Market Outlook, By Mobile-Based (2023-2034) ($MN)
Table 31 Global AI Automation Testing Market Outlook, By End User (2023-2034) ($MN)
Table 32 Global AI Automation Testing Market Outlook, By IT & Telecommunication (2023-2034) ($MN)
Table 33 Global AI Automation Testing Market Outlook, By Healthcare (2023-2034) ($MN)
Table 34 Global AI Automation Testing Market Outlook, By BFSI (2023-2034) ($MN)
Table 35 Global AI Automation Testing Market Outlook, By Government (2023-2034) ($MN)
Table 36 Global AI Automation Testing Market Outlook, By Defense And Aerospace (2023-2034) ($MN)
Table 37 Global AI Automation Testing Market Outlook, By Energy & Utilities (2023-2034) ($MN)
Table 38 Global AI Automation Testing Market Outlook, By Other End Users (2023-2034) ($MN)
Note: Tables for North America, Europe, APAC, South America, and Middle East & Africa Regions are also represented in the same manner as above.

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