International Scientific Journal "Internauka" https://doi.org/10.25313/2520-2057-2025-2

Технічні науки

#### UDC 004.4

#### Kostiuk Anastasiia

Senior Talent Acquisition Consultant at Advanced Systems Design (ASD), Expert in AI implementation and recruitment process automation, Author of the IT Recruitment Course at Projector Institute, Former Global Talent Acquisition Manager at Star

#### THE FUNCTIONALITY OF APPLICANT TRACKING SYSTEMS (ATS)

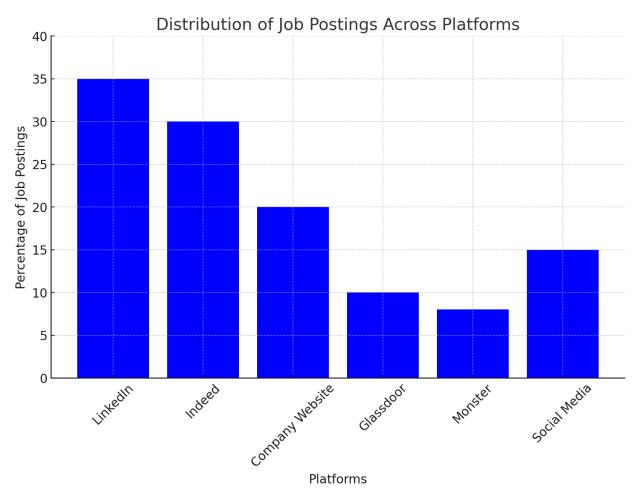
Summary. In today's competitive job market, organizations are increasingly turning to technology to streamline their recruitment processes. Applicant Tracking Systems (ATS) have emerged as a critical tool for managing hiring workflows, from job posting to candidate selection. These systems not only automate repetitive tasks but also integrate advanced AI features to enhance decision-making and improve hiring outcomes. A key component of ATS functionality is CV parsing, which plays a vital role in transforming unstructured resume data into actionable insights. Additionally, ATS platforms address critical concerns such as GDPR compliance, security, and user management, ensuring that recruitment processes are both efficient and secure. This article delves into the core functionalities of ATS, with a focus on CV parsing, workflow and communication tools, reporting capabilities, GDPR compliance, security, and user management, while also exploring their benefits, challenges, and future trends.

**Key words:** Applicant Tracking System (ATS), ATS functionality, Recruitment automation, CV parsing, AI in recruitment, Diversity and inclusion in hiring, GDPR compliance in recruitment, Recruitment workflow tools, Candidate matching, Predictive analytics in hiring.

# **Core Functionalities of ATS**

## Job Posting and Distribution

One of the primary functions of an ATS is its ability to automate job posting and distribution. Instead of manually posting job openings on multiple platforms, recruiters can use an ATS to publish vacancies across company websites, job boards, social media, and niche industry sites with just a few clicks. This ensures consistency in job advertisements and maximizes reach, attracting a larger pool of qualified candidates.



A bar chart showing the distribution of job postings across platforms (e.g., LinkedIn, Indeed, company website).

### **Application Tracking and Workflow Management**

An ATS provides a centralized platform for tracking candidates as they move through the recruitment pipeline. Recruiters can monitor each candidate's progress through stages such as application review, interviews, and offers. This ensures a smooth and organized hiring process, reducing the risk of losing track of candidates or missing critical steps.

### CV Parsing and Candidate Database

CV parsing is a cornerstone feature of modern ATS platforms. It involves extracting relevant information from resumes, such as contact details, work experience, education, and skills, and converting it into a structured format. This eliminates the need for manual data entry and ensures that candidate information is easily searchable and accessible.

For example, if a candidate submits a resume in PDF or Word format, the ATS uses natural language processing (NLP) algorithms to identify key sections and populate fields in the candidate database. This allows recruiters to filter candidates based on specific criteria, such as years of experience, certifications, or technical skills, significantly speeding up the screening process.

## **Communication and Collaboration**

Effective communication is crucial in recruitment, and ATS systems excel in this area. They offer tools for automated email templates, interview scheduling, and real-time updates, ensuring that candidates are kept informed throughout the process. Additionally, ATS platforms facilitate collaboration among hiring teams by allowing multiple users to access and update candidate information simultaneously.

## **Communication Tools**

Modern ATS platforms go beyond basic recruitment tasks by offering robust workflow and communication tools. These systems integrate with popular communication platforms like Zoom, Microsoft Teams, and Webex, enabling

#### International Scientific Journal "Internauka" https://doi.org/10.25313/2520-2057-2025-2

seamless scheduling and conducting of interviews directly within the ATS. For example, recruiters can send calendar invites, share interview links, and even record sessions for later review.

Additionally, AI-driven tools like Olivia from Paradox AI are revolutionizing candidate engagement. Olivia acts as a virtual assistant, interacting with candidates in real-time to answer questions, provide updates, and guide them through the application process. This not only enhances the candidate experience but also reduces the administrative burden on recruiters.

#### **Reporting and Analytics**

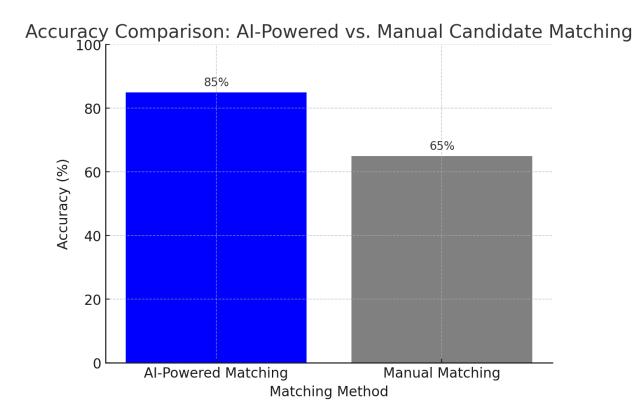
Data-driven decision-making is a key advantage of using an ATS. These systems generate detailed reports and analytics on various metrics, such as time-tohire, cost-per-hire, and source effectiveness. Recruiters can use this data to identify bottlenecks, optimize processes, and make informed decisions that improve overall recruitment efficiency.

Moreover, many ATS platforms allow integration with external analytics systems like Amazon QuickSight, enabling organizations to create beautiful, customizable dashboards. These dashboards provide real-time insights into recruitment performance, helping stakeholders visualize data and make strategic decisions.

#### **Integration of Advanced AI Features**

#### **AI-Powered Candidate Matching**

One of the most significant advancements in ATS technology is the integration of AI-powered candidate matching. These algorithms analyze resumes and job descriptions to identify the best-fit candidates based on skills, experience, and cultural fit. By automating the initial screening process, AI reduces the time recruiters spend on manual resume reviews and improves the quality of shortlisted candidates.



A bar chart comparing the accuracy of AI-powered matching vs. manual matching.

## **Predictive Analytics**

Predictive analytics is another AI feature that enhances the functionality of ATS. By analyzing historical data, these systems can forecast hiring outcomes, such as the likelihood of a candidate accepting an offer or their potential job performance. This enables recruiters to prioritize high-potential candidates and make data-driven decisions that improve hiring outcomes.

### **Chatbots and Virtual Assistants**

AI-driven chatbots and virtual assistants are transforming candidate engagement. Tools like Olivia from Paradox AI interact with candidates in real-time, answering questions, providing updates, and even conducting initial screenings. This not only improves the candidate experience but also frees up recruiters to focus on more strategic tasks.

## **Bias Reduction and Diversity & Inclusion**

AI plays a crucial role in reducing unconscious bias and promoting diversity and inclusion (D&I) in the recruitment process. By anonymizing candidate information and focusing on objective criteria, AI algorithms help ensure a fair and equitable selection process. For example, some ATS platforms remove identifying details such as names, photos, and gender indicators during the initial screening phase, ensuring that candidates are evaluated solely on their qualifications.

Additionally, ATS systems can track and report on diversity metrics, such as the percentage of underrepresented groups in the applicant pool and hiring outcomes. This data helps organizations identify gaps in their recruitment processes and implement targeted D&I initiatives. For instance, if the data shows a lack of gender diversity in technical roles, the organization can partner with women-focused tech communities or revise job descriptions to attract a more diverse candidate pool.

### **GDPR** Compliance and Security

### **GDPR** Compliance

With the implementation of the General Data Protection Regulation (GDPR), organizations must ensure that their recruitment processes comply with strict data protection standards. ATS platforms are designed to help organizations meet these requirements by providing features such as data encryption, consent management, and automatic data deletion after a specified period. For example, candidates can be asked to provide explicit consent for their data to be stored and processed, and the ATS can automatically delete candidate information after the retention period expires.

## Security

Security is a top priority for ATS platforms, given the sensitive nature of candidate data. Modern ATS systems employ advanced security measures such as multi-factor authentication (MFA), role-based access control (RBAC), and regular

security audits to protect against data breaches and unauthorized access. Additionally, many ATS platforms are ISO 27001 certified, ensuring that they adhere to international standards for information security management.

### User Management

Effective user management is critical for ensuring that the right people have access to the right information within an ATS. ATS platforms offer role-based access control (RBAC), allowing administrators to assign specific permissions to users based on their roles. For example, recruiters may have access to candidate profiles and interview schedules, while hiring managers may only have access to shortlisted candidates. This ensures that sensitive information is only accessible to authorized personnel.

### **Benefits of Using ATS**

## **Efficiency and Time Savings**

One of the most immediate benefits of using an ATS is the significant time savings it offers. By automating repetitive tasks such as resume screening and interview scheduling, recruiters can focus on more strategic activities, such as building relationships with candidates and hiring managers.

## **Improved Candidate Experience**

A well-implemented ATS can greatly enhance the candidate experience. Features such as automated communication, easy application processes, and timely updates ensure that candidates have a positive impression of the organization, even if they are not ultimately selected.

## **Enhanced Quality of Hire**

With advanced features like AI-powered candidate matching and predictive analytics, ATS systems help organizations identify and attract top talent. This leads to a higher quality of hire, which in turn contributes to better organizational performance.

## **Compliance and Risk Management**

ATS systems help organizations stay compliant with various legal and regulatory requirements. They can automatically track and report on equal employment opportunity (EEO) data, manage documentation, and ensure that all recruitment practices are in line with relevant laws.

### **Challenges and Considerations**

### **Implementation and Integration**

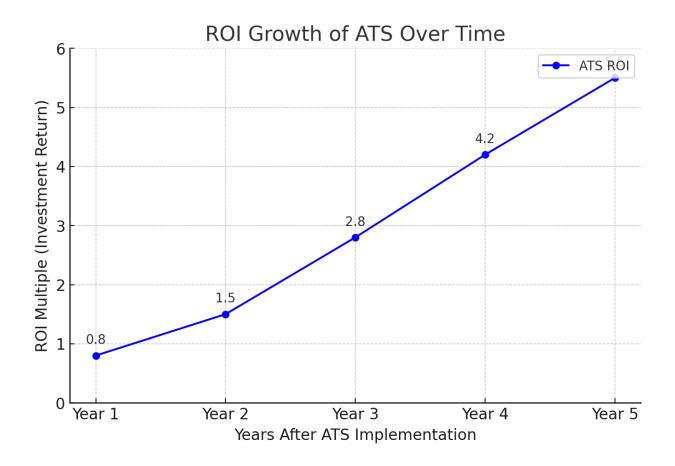
While the benefits of an ATS are clear, implementing and integrating the system into existing workflows can be challenging. Organizations must ensure that the ATS is compatible with their current Recruiting systems and that staff are adequately trained to use it effectively.

### **Data Privacy and Security**

With the increasing reliance on digital tools, data privacy and security have become major concerns. Organizations must ensure that their ATS complies with data protection regulations and that candidate information is securely stored and managed.

### **Cost and ROI**

The cost of implementing an ATS can be significant, particularly for small and medium-sized enterprises (SMEs). Organizations must carefully consider the return on investment (ROI) and ensure that the benefits of the system outweigh the costs.



A line graph showing the ROI of an ATS over time.

### **Future Trends in ATS**

## **Increased Use of AI and Machine Learning**

As AI and machine learning technologies continue to evolve, their integration into ATS systems is expected to deepen. This will lead to even more sophisticated candidate matching, predictive analytics, and automation capabilities.

#### **Enhanced Candidate Engagement**

Future ATS systems are likely to place a greater emphasis on candidate engagement. This could include more personalized communication, gamified application processes, and virtual reality (VR) experiences that give candidates a glimpse into the company culture.

## **Greater Focus on Diversity and Inclusion**

Diversity and inclusion will remain a key focus for organizations, and ATS systems will play a crucial role in achieving these goals. Future developments may include more advanced bias detection algorithms and tools for tracking diversity metrics.

### **Integration with Other Recruiting Technologies**

The integration of ATS with other Recruiter technologies, such as performance management systems and learning management systems (LMS), is expected to increase. This will create a more seamless and holistic approach to talent management.

**Conclusion.** Applicant Tracking Systems (ATS) have revolutionized recruitment by automating workflows, improving efficiency, and leveraging AI for smarter decision-making. From job posting and CV parsing to advanced AI features like candidate matching and bias reduction, ATS platforms are transforming how organizations attract and hire talent. With workflow and communication tools like Zoom, Teams, and Olivia from Paradox AI, and reporting capabilities that integrate with systems like Amazon QuickSight, ATS platforms are becoming indispensable in the recruitment landscape. Additionally, features like GDPR compliance, advanced security measures, user management, and D&I initiatives ensure that recruitment processes are efficient, secure, and equitable. As technology continues to evolve, ATS will play an even more critical role in helping businesses stay competitive. By adopting these tools, organizations can streamline their hiring processes, enhance candidate experience, and achieve better hiring outcomes.

### References

1. Paradox AI. (2023). *Olivia: The AI Assistant for Recruitment*. This source provides information on AI-driven virtual assistants like Olivia and their role in modern recruitment.

2. General Data Protection Regulation (GDPR). (2018). *Regulation (EU)* 2016/679. Official documentation on GDPR compliance requirements for data protection and privacy.

3. Amazon QuickSight. (2023). *Business Intelligence and Analytics*. Information on integrating ATS with external analytics tools like Amazon QuickSight for advanced reporting.

4. SHRM (Society for Human Resource Management). (2023). *Applicant Tracking Systems: What You Need to Know*. A comprehensive guide to ATS functionality and its benefits for HR professionals.

5. McKinsey & Company. (2020). *Diversity Wins: How Inclusion Matters*. A report on the importance of diversity and inclusion in the workplace and how technology can support these initiatives.

6. ISO/IEC 27001:2013. (2013). *Information Security Management*. Details on the international standard for information security management, relevant to ATS security features.

7. LinkedIn Talent Solutions. (2023). *Global Talent Trends Report*. Insights into recruitment trends, including the use of AI and ATS in talent acquisition.

8. Harvard Business Review. (2021). *How AI is Reducing Bias in Hiring*. An article discussing the role of AI in reducing unconscious bias and promoting diversity in recruitment.

9. Gartner. (2023). *The Future of Recruitment Technology*. A report on emerging trends in recruitment technology, including AI and machine learning.

International Scientific Journal "Internauka" <u>https://doi.org/10.25313/2520-2057-2025-2</u>

10. Glassdoor. (2023). *What is an Applicant Tracking System (ATS)?* A beginner-friendly explanation of ATS and its role in modern recruitment.