

API Documentation: Employee Skill & Performance Management API

(SkillTrack API)

Overview:

The state-of-the-art RESTful API SkillTrack API was created to simplify talent development, performance monitoring, and employee skill evaluation—all essential tasks for IT HRs and recruiting teams. It gives businesses the opportunity to use data-driven insights to maximize employee productivity, retention, and capabilities.

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1. Introduction

The **SkillTrack API** provides a scalable, secure interface for HR and talent teams to:

- Track employee skills and competencies
- Conduct regular performance reviews
- Manage training programs and certifications
- Generate comprehensive analytics for strategic HR decisions

Organizations can enable data-driven enrollment, increase engagement among workers, and retain talent by integrating the SkillTrack API.

2. Authentication

All API requests require OAuth 2.0 token-based authentication. Obtain a token by calling the authentication endpoint:

http

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POST <https://api.skilltrack.com/v1/auth/token>

Content-Type: application/json

```
{  
  "client_id": "YOUR_CLIENT_ID",  
  "client_secret": "YOUR_CLIENT_SECRET",  
  "grant_type": "client_credentials"  
}
```

Response:

json

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```
{
```

```
"access_token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9...",
"expires_in": 3600,
"token_type": "Bearer"
}
```

Include the token in your headers:

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Authorization: Bearer {access_token}

3. Endpoints

3.1 Employee Management

- **Get employee list**

http

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GET /v1/employees

Authorization: Bearer {access_token}

Response:

json

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[

{

"employee_id": "12345",

"name": "Jane Doe",

"email": "jane.doe@example.com",

"department": "Engineering",

```
"role": "Software Engineer",  
  "hire_date": "2022-01-15"  
},  
...  
]
```

- **Add new employee**

http

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POST /v1/employees

Content-Type: application/json

Authorization: Bearer {access_token}

```
{  
  "name": "John Smith",  
  "email": "john.smith@example.com",  
  "department": "Product",  
  "role": "Product Manager",  
  "hire_date": "2023-04-01"  
}
```

3.2 Skill Inventory

- **Get employee skills**

http

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GET /v1/employees/{employee_id}/skills

Authorization: Bearer {access_token}

Response:

json

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```
[  
  {  
    "skill_name": "Python",  
    "proficiency_level": "Expert",  
    "last_used": "2025-05-20"  
  },  
  {  
    "skill_name": "AWS Cloud",  
    "proficiency_level": "Intermediate",  
    "last_used": "2025-04-30"  
  }  
]
```

- **Add or update skill**

http

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PUT /v1/employees/{employee_id}/skills

Content-Type: application/json

Authorization: Bearer {access_token}

```
{  
  "skill_name": "Docker",
```

```
"proficiency_level": "Advanced",  
"last_used": "2025-06-01"  
}
```

3.3 Performance Reviews

- **Get performance review history**

http

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GET /v1/employees/{employee_id}/performance-reviews

Authorization: Bearer {access_token}

Response:

json

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```
[  
  {  
    "review_id": "rev123",  
    "date": "2025-03-15",  
    "reviewer": "Manager Name",  
    "score": 4.5,  
    "comments": "Excellent problem-solving and leadership skills."  
  },  
  ...  
]
```

- **Submit new review**

http

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POST /v1/employees/{employee_id}/performance-reviews

Content-Type: application/json

Authorization: Bearer {access_token}

```
{  
  "date": "2025-06-01",  
  "reviewer": "HR Specialist",  
  "score": 4.7,  
  "comments": "Strong communication and teamwork demonstrated."  
}
```

3.4 Training & Certifications

- **List employee certifications**

http

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GET /v1/employees/{employee_id}/certifications

Authorization: Bearer {access_token}

Response:

json

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```
[  
  {  
    "certification_name": "AWS Certified Solutions Architect",  
    "issued_by": "Amazon",
```

```
"date_issued": "2024-11-10",  
"expiration_date": "2026-11-10"  
}  
]
```

- **Add certification**

http

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POST /v1/employees/{employee_id}/certifications

Content-Type: application/json

Authorization: Bearer {access_token}

```
{  
  "certification_name": "Certified Scrum Master",  
  "issued_by": "Scrum Alliance",  
  "date_issued": "2025-02-15",  
  "expiration_date": "2027-02-15"  
}
```

3.5 Analytics & Reporting

- **Get skill gap analysis**

http

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GET /v1/reports/skill-gap?department=Engineering&required_skill=Kubernetes

Authorization: Bearer {access_token}

Response:

json

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```
{
  "department": "Engineering",
  "required_skill": "Kubernetes",
  "employees_lacking_skill": [
    {"employee_id": "23456", "name": "Alice Johnson"},
    {"employee_id": "34567", "name": "Bob Lee"}
  ]
}
```

- **Get top performers**

http

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GET /v1/reports/top-performers?period=Q1-2025

Authorization: Bearer {access_token}

Response:

json

CopyEdit

```
[
  {"employee_id": "12345", "name": "Jane Doe", "average_score": 4.8},
  {"employee_id": "67890", "name": "Mark Spencer", "average_score": 4.7}
]
```

4. Rate Limits

To ensure optimal performance and security, SkillTrack enforces the following rate limits:

- 1000 requests per minute per client
- 5000 requests per hour per client

Exceeding limits results in HTTP 429 status code responses.

5. Error Handling

SkillTrack API uses standard HTTP status codes:

Status Code	Meaning	Description
200	OK	Successful request
400	Bad Request	Invalid parameters
401	Unauthorized	Missing or invalid token
403	Forbidden	Insufficient permissions
404	Not Found	Resource does not exist
429	Too Many Requests	Rate limit exceeded
500	Internal Server Error	Server malfunction

Example error response:

json

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```
{  
  "error": "Invalid token",  
  "message": "Access token is expired or invalid."  
}
```

6. Best Practices

- Use OAuth 2.0 token refresh to maintain session continuity
 - Cache responses for frequently requested endpoints to improve latency
 - Validate input data before making API calls to reduce errors
 - Implement exponential backoff on 429 errors to avoid rate limit blocks
 - Monitor API usage regularly via the dashboard for compliance
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7. FAQs

Q1: Can I export all employee skills as a CSV?

A: Yes, use the `/v1/employees/skills/export` endpoint with authentication.

Q2: How often is the performance review data updated?

A: Data is updated in real-time when new reviews are submitted.

Q3: Is SkillTrack API GDPR compliant?

A: Yes, all data is managed according to GDPR guidelines.

8. Changelog

- v1.0 (2025-05-01): Initial release with core employee, skills, performance, and certifications endpoints
 - v1.1 (2025-06-01): Added analytics endpoints for skill gap and top performers
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Final Notes

SkillTrack API integrates seamlessly with HRIS systems, ATS platforms, and learning management tools, enabling **data-driven HR management**, **talent optimization**, and **strategic workforce planning**—key priorities for tech giants like Google, Amazon, Microsoft, and more.