

Škoda AI Skill Coach

The Next-Generation Talent Intelligence System

Team SAC

42 PRAGUE HACKATHON 2025

The \$8.5 Trillion Challenge

87%

of companies report skills gaps or expect them within a few years.

\$8.5 Trillion

in unrealized annual revenues globally by 2030 due to talent shortages.

31%

Only 31% of HR professionals believe their companies can effectively identify skill gaps.

Sector Risk Comparison



Healthcare, public sector, and supply chains face disproportionate risk due to the skills gap.

The Problem: Skills vs. Data

⚠️ Current Pain Points

- **Silent Expiration:** Mandatory certifications expire without warning.
- **Visibility Gap:** Managers lack reliable skill visibility and rely on gut feeling.
- **Unclear Paths:** Career paths are undefined, leading to stagnation.
- **Manual Processes:** HRBP decisions rely on manual, outdated spreadsheets.

🎯 What ŠKODA Needs

- **Unified Intelligence:** A single source of truth for all talent data.
- **Automated Risk Detection:** Proactive alerts before certifications expire.
- **Real-time Insights:** Live readiness data for instant decision making.
- **Long-term Forecasting:** Predictive analytics for future skill needs.

Skills Evolve Faster Than Data

Traditional HR systems are static, reactive, and disconnected from reality.

- **Silent Expiration**
Mandatory certifications expire without warning, creating compliance risks.
- **Visibility Gap**
Managers rely on gut feeling rather than data to assess team readiness.
- **Reactive Planning**
Hiring happens only *after* a critical gap stops production.



Multi-Role Intelligence

Three User Personas. One AI Brain.



Manager

Team Capability Dashboard
Skill Risk Detection
Promotion Readiness



HRBP

Department
Benchmarking
Org-wide Dashboard
Strategic Planning



Employee

My Career Dashboard
Personalized Career
Paths
Training
Recommendations

Five AI Engines



Team Capability

Computes 6-dimensional capability vectors & team scores.



Skill Risk Radar

Detects expiring certifications & missing training.



Promotion Readiness

Weighted scoring based on skills & experience.



Career Path (Azure AI)

Generates future roles with timeline predictions.



5-Year Forecast

Predicts emerging & declining skills for planning.

Live Intelligence Dashboard

Experience the future of talent management.

- ⚡ **Real-time alerts** for instant awareness.
- 📊 **Interactive radar charts** for visual analysis.
- 🧠 **AI-driven recommendations** for actionable insights.

LAUNCH PROTOTYPE



Enterprise-Grade Architecture



Azure AI

Powered by GPT-4 for natural language queries and predictive logic.



React & FastAPI

Modern, responsive frontend with a robust, scalable backend.

On FE we used: React,
Vite, Tailwind CSS, Chakra
UI

On BE: Python, FastAPI



Containerized

Docker & Kubernetes
ready for secure,
cloud-agnostic
deployment.



PostgreSQL

Reliable, structured data
storage for thousands of
employee records.

From Reactive to Predictive

-35% Hiring Costs
(Predicting Gaps Early)

+25% Retention Rate
(Personalized Paths)

15h Saved Per Week
(For HR & Managers)

"Transforming HR from a support function to a strategic partner."

Built by Team SAC

Aliyu Abdulbasit Ayinde Lead AI Architect &
System Engineer

Sude Naz Karayıldırım Frontend Developer & UX
Designer

Ahmet Bakırcan Frontend & UX Developer

Takato Mitsuya Data Analyst & Developer

Sergiu Nica Data Analyst & Developer

Thank you

for your time.

Team SAC

42 Prague Hackathon

Team Capability

Risk Radar

Promotion Readiness

Skills Heatmap

AI Assistant

Team Capability Dashboard

Team SE · 215 members · Updated just now



Team SE

215

Team Members



Developing

59%

Capability Score



Coverage

10%

Avg Skill Coverage



Action Needed

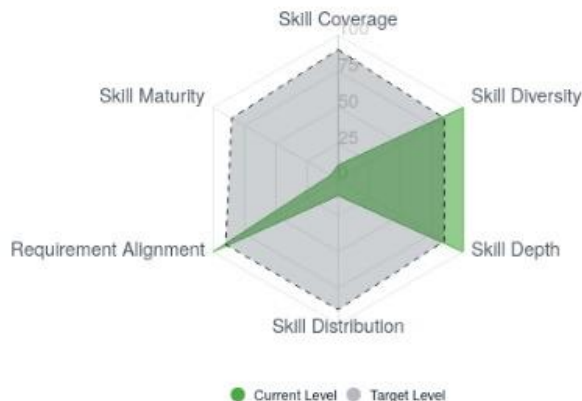
10

Critical Gaps

Team Capability Profile

6-dimensional team strength assessment

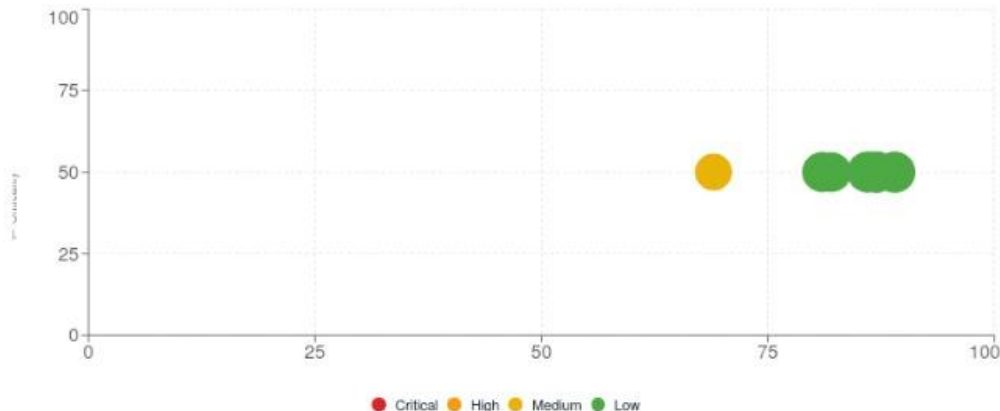
59% Overall



Skill Risk Matrix

Supply vs Criticality (bubble size = affected employees)

View Radar



Top 3 Recommended Actions

AI-ranked by impact and urgency

Critical

Address skill gap: Zivotni Prostredi Kategorie D (only 9.8% coverage)

+15% team capability · Complete within 30 days · Cost: TBD

Take Action

High

Address skill gap: Orientace Na Vysledky (only 16.7% coverage)

+12% team capability · Complete within 30 days · Cost: TBD

Take Action



Martin Kovář
Engineering Manager





Skill Coach

AI-Powered Talent Intelligence

» Org Dashboard

» Future Forecast

» AI Assistant

Cross-Department Skill Comparison

5 core competency areas across departments.

Department	Technical	Leadership	Digital	Compliance	Innovation	Avg
Engineering	88	72	78	92	85	83
Manufacturing	75	88	65	95	70	79
R&D	92	68	82	78	90	82
IT	95	75	92	88	82	86
Quality	82	92	72	98	75	84

Strategic Workforce Planning (2025)

AI-generated recommendations for org-wide talent strategy

Executive Summary



Hiring Needs

- Q1 2025: 12 Cloud Architects
- Q2 2025: 8 AI/ML Engineers
- Q3 2025: 15 Cybersecurity Specialists



Promotion Pipeline

- 18 employees ready for promotion
- 24 in development pipeline
- Est. promotion cost: 4.2M CZK



Training Budget

- 2025 recommended: 12.4M CZK
- Critical skills: 6.8M CZK
- Leadership dev: 3.2M CZK



Attrition Risk

- 24 employees high flight risk
- 8 key roles vulnerable
- Retention actions needed: 15

Team Capability

Risk Radar

Promotion Readiness

Skills Heatmap

AI Assistant

Skill Risk Radar

AI-powered risk detection & prevention · Team SE

High Risk

Immediate intervention required

196

Medium Risk

Monitor and plan actions

1

Low Risk

On track, no action needed

18

Risk Radar Visualization



High Risk Employees

9	9186	Unknown Role	100%
Certification 'Compliance 5 - Etický kodex' expired 2130 days ago			
Certification 'Řidic motorového vozíku' expired 7343 days ago			
Certification 'Bezpečnost práce - kategorie D' expired 4338 days ago			
Certification 'Pozární ochrana na prac.pro zaměstnance' expired 3844 days ago			
Certification 'Zaklady systému řízení kvality pro "D"' expired 4210 days ago			
Certification 'Životní prostředí - kategorie D' expired 4096 days ago			
Certification 'Hospodareni s energiemi - kategorie D' expired 3326 days ago			
Certification 'Bezpečnost práce - kategorie D' expired 3973 days ago			
Certification 'Zaklady systému řízení kvality pro "D"' expired 4149 days ago			
Certification 'Zaklady systému řízení kvality pro "D"' expired 3784 days ago			
Certification 'Zaklady systému řízení kvality pro "THZ"' expired 3017 days ago			
Certification 'Bezpečnost práce - kategorie D' expired 3610 days ago			
Certification 'Životní prostředí - kategorie D' expired 3608 days ago			
Certification 'Pozární ochrana na prac.pro zaměstnance' expired 3126 days ago			
Certification 'Zaklady systému řízení kvality pro "D"' expired 3412 days ago			
Certification 'Bezpečnost práce - kategorie D' expired 3244 days ago			
Certification 'Životní prostředí - kategorie D' expired 3244 days ago			
Certification 'ISMS System řízení bezpečnosti informací' expired 3226 days ago			
Certification 'Bezpečnost práce - kategorie D' expired 2880 days ago			
Certification 'Životní prostředí - kategorie D' expired 2879 days ago			
Certification 'Zaklady systému řízení kvality pro "D"' expired 2879 days ago			
Certification 'Hospodareni s energiemi - kategorie D' expired 2875 days ago			
Certification 'ISMS System řízení bezpečnosti informací' expired 2871 days ago			
Certification 'Compliance 2 - Etický kodex' expired 2792 days ago			
Certification 'Compliance 1 - Boj proti korupci' expired 2435 days ago			
Certification 'Pozární ochrana na prac.pro zaměstnance' expired 2396 days ago			
Certification 'Bezpečnost práce - kategorie D' expired 2515 days ago			



Medium Risk

6 611847 40%

AI Risk Predictions

9186	Certification 'Compliance 5 - Eticky kodex' expired 2130 days ago	Critical
	Impact expected soon	
14607	Certification 'ISMS System rizeni bezpecnosti informaci' expired 6900 days ago	Critical
	Impact expected soon	
15001	Certification 'ISMS System rizeni bezpecnosti informaci' expired 6535 days ago	Critical
	Impact expected soon	

Recommended Interventions

Ranked by risk reduction impact

#1	Certification 'Compliance 5 - Eticky kodex' expired 2130 days ago	Critical	Schedule
	Reduces risk by 45% Cost: TBD Timeline: Immediate		
#2	Certification 'Ridic motoroveho voziku' expired 7343 days ago	Critical	Schedule
	Reduces risk by 45% Cost: TBD Timeline: Immediate		
#3	Certification 'Bezpecnost prace - kategorie D' expired 4338 days ago	Critical	Schedule
	Reduces risk by 45% Cost: TBD Timeline: Immediate		
#4	Certification 'Pozarni ochrana na prac.pro zamestnance' expired 3844 days ago	Critical	Schedule
	Reduces risk by 45% Cost: TBD Timeline: Immediate		



My Career Dashboard

Personal development · Career progression · AI coaching



Senior

L4

Current Level



+8%

78%

Skill Coverage

+8% this year



Action Needed

5/6

Certifications

1 expiring soon



2024

48

Learning Hours

This year

Your Career Path Options

3 progression paths based on your skills and interests

Principal Engineer Recommended

Unknown

Current Position · L4

Exploratory

45%

Career Path Option 1

12 months to ready

Your Strengths:

Skills to Develop:

● Skill development needed

View Roadmap

Exploratory

40%

Career Path Option 2

12 months to ready

Your Strengths:

Skills to Develop:

● Skill development needed

View Roadmap

Exploratory

35%

Career Path Option 3

12 months to ready

Your Strengths:

Skills to Develop:

● Skill development needed

View Roadmap

Principal Engineer Readiness

Your progress toward target role:

85% Ready

No skills data available



Martin Kovář

Engineering Manager



Promotion Readiness

Team-wide promotion planning & succession pipeline

Export PDF

Ready Now (≥85%)

0



In Progress (70-84%)

206



Needs Support (<70%)

9



Avg Timeline

12.0

months

Search employees...

All Target Roles

All Readiness Levels

<input type="checkbox"/> Employee	Current Role	Target Role	Readiness	Timeline	Status	Key Gaps	Actions
<input type="checkbox"/> 1 14607	Unknown Role	Target Role	79%	12 months	In Progress		
<input type="checkbox"/> 1 15001	Unknown Role	Target Role	79%	12 months	In Progress		
<input type="checkbox"/> 1 15845	Unknown Role	Target Role	79%	12 months	In Progress		
<input type="checkbox"/> 1 15902	Unknown Role	Target Role	79%	12 months	In Progress		
<input type="checkbox"/> 1 16085	Unknown Role	Target Role	79%	12 months	In Progress		
<input type="checkbox"/> 1 16210	Unknown Role	Target Role	79%	12 months	In Progress		
<input type="checkbox"/> 1 16249	Unknown Role	Target Role	79%	12 months	In Progress		
<input type="checkbox"/> 1 16687	Unknown Role	Target Role	79%	12 months	In Progress		
<input type="checkbox"/> 1 16692	Unknown Role	Target Role	79%	12 months	In Progress		



Skill Coach

AI-Powered Talent Intelligence

Team Capability

Risk Radar

Promotion Readiness

Skills Heatmap

AI Assistant



Martin Kovář

Engineering Manager



1

180159

Unknown Role

Target Role

69%

12 months

Needs Support



6

606251

Unknown Role

Target Role

69%

12 months

Needs Support



6

680265

Unknown Role

Target Role

69%

12 months

Needs Support



6

612830

Unknown Role

Target Role

69%

12 months

Needs Support



6

612874

Unknown Role

Target Role

69%

12 months

Needs Support



1

180326

Unknown Role

Target Role

69%

12 months

Needs Support



1

180348

Unknown Role

Target Role

69%

12 months

Needs Support



AI Promotion Recommendations

14607 → Target Role

79% Ready

Timeline: 12 months

View Details

View Career Path

15001 → Target Role

79% Ready

Timeline: 12 months

View Details

View Career Path

15845 → Target Role

79% Ready

Timeline: 12 months

View Details

View Career Path



Skill Coach

AI-Powered Talent Intelligence

Team Capability

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Skills Heatmap

AI Assistant

AI Assistant

Ask anything about skills, teams, gaps, predictions, and candidates



Škoda AI Coach

Powered by predictive intelligence

Online



Hello! I'm your Škoda AI Skill Coach assistant. I can help you analyze team skills, predict future gaps, compare departments, and identify candidates for specific roles. What would you like to know?

10:23

Ask about team skills, gaps, predictions, or candidates...



Suggested Queries

Team Analysis

What are the critical skill gaps in Engineering team?

Show me employees at risk of qualification expiry

Which team members are ready for promotion?

Predictions

Forecast skill needs for Q2 2025

Predict attrition risk in next 6 months

What skills will be obsolete by 2026?

Comparisons

Compare Engineering vs Manufacturing skill coverage

Benchmark our AI/ML skills against industry

Show department skill heatmap comparison

Deep Dive Analysis

Succession Risk Analysis

Identify vulnerable key roles

Skill Atrophy Detection

Find underutilized competencies

Training ROI Analysis

Measure course effectiveness

Career Path Simulation

Model employee progressions



Martin Kovář

Engineering Manager

