



SKILL DNA

Your Talent Genome. Decoded.

Refined. Rebuilt.

</>42 Prague Hackathon | Nov 2025

presented by
ÇAJ_TEAM

THE GOAL

Automated Competency Detection

We built an AI that **reads company history** to identify exactly what employees can do.

Most companies rely on static job titles. We process raw data to extract verified, real-world competencies automatically.



"Competency Profiles"

THE INPUT

Mining 12 Years of Employee Data

Competency data is hidden in messy formats. We processed **12 years** of diverse Škoda records to find the signal in the noise.

Historical Logs

POSITIONS &
PROJECTS

Certifications

HARD SKILLS

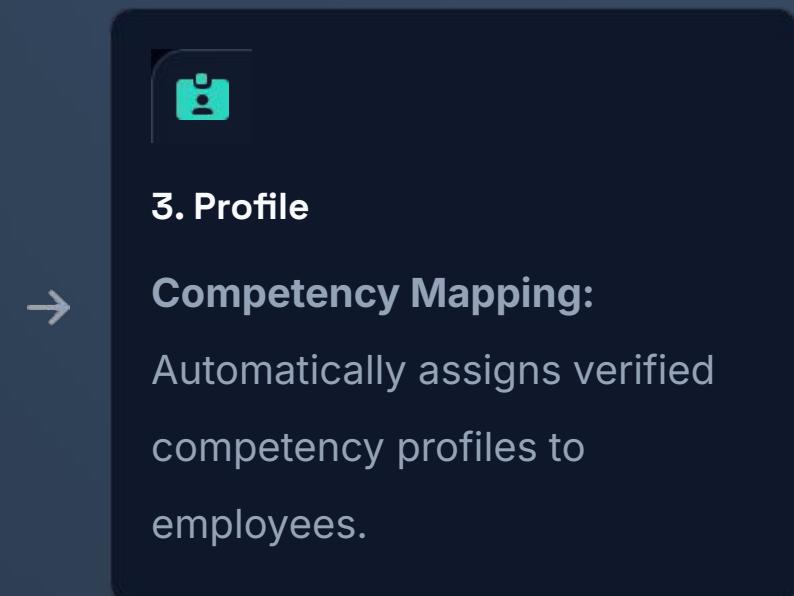
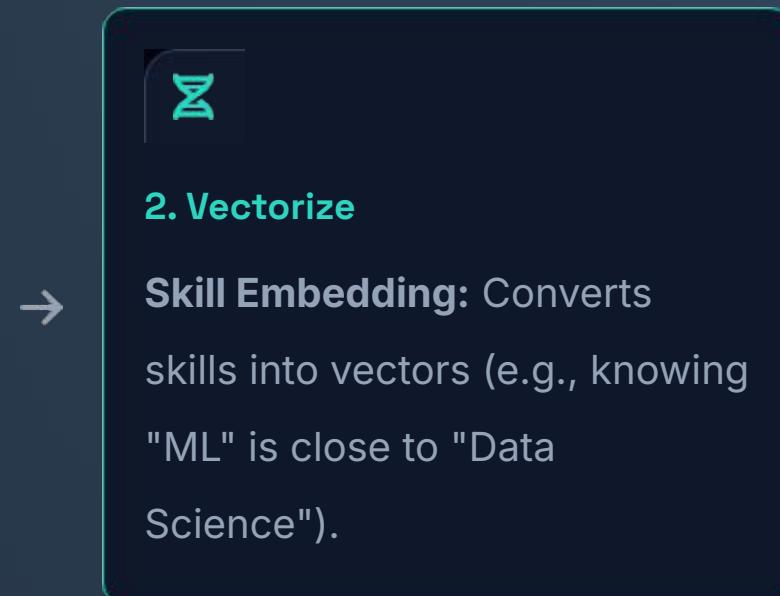
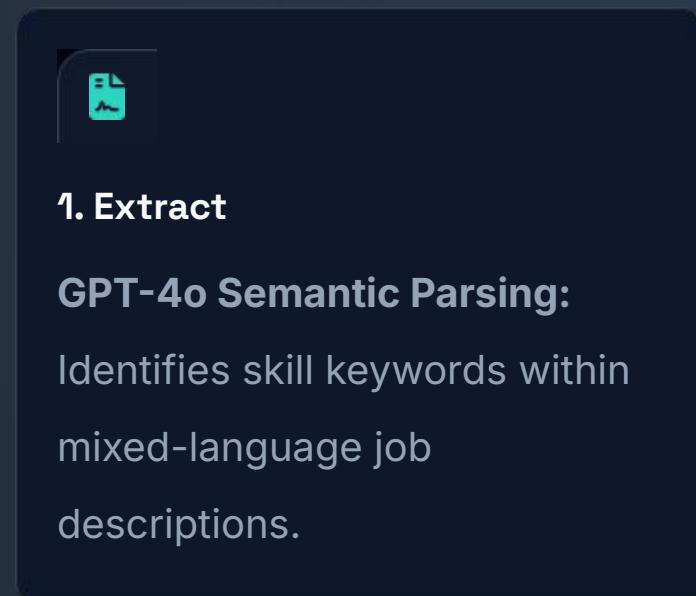
Org Structure

TEAM
CONTEXT

The Challenge: Connecting disparate data points (Courses + Job History) to build a complete "Competency Genome"

From Raw Text to Verified Skills

How does the AI know who is good at what? Our 3-step detection pipeline:



THE VALUE

Actionable Competency Insights

Skill Discovery

"Found 50 employees with hidden Python skills."

Gap Analysis

"Marketing team lacks Data Analytics competencies."

Role Evolution

"Q&A roles are evolving into Automation Engineers."

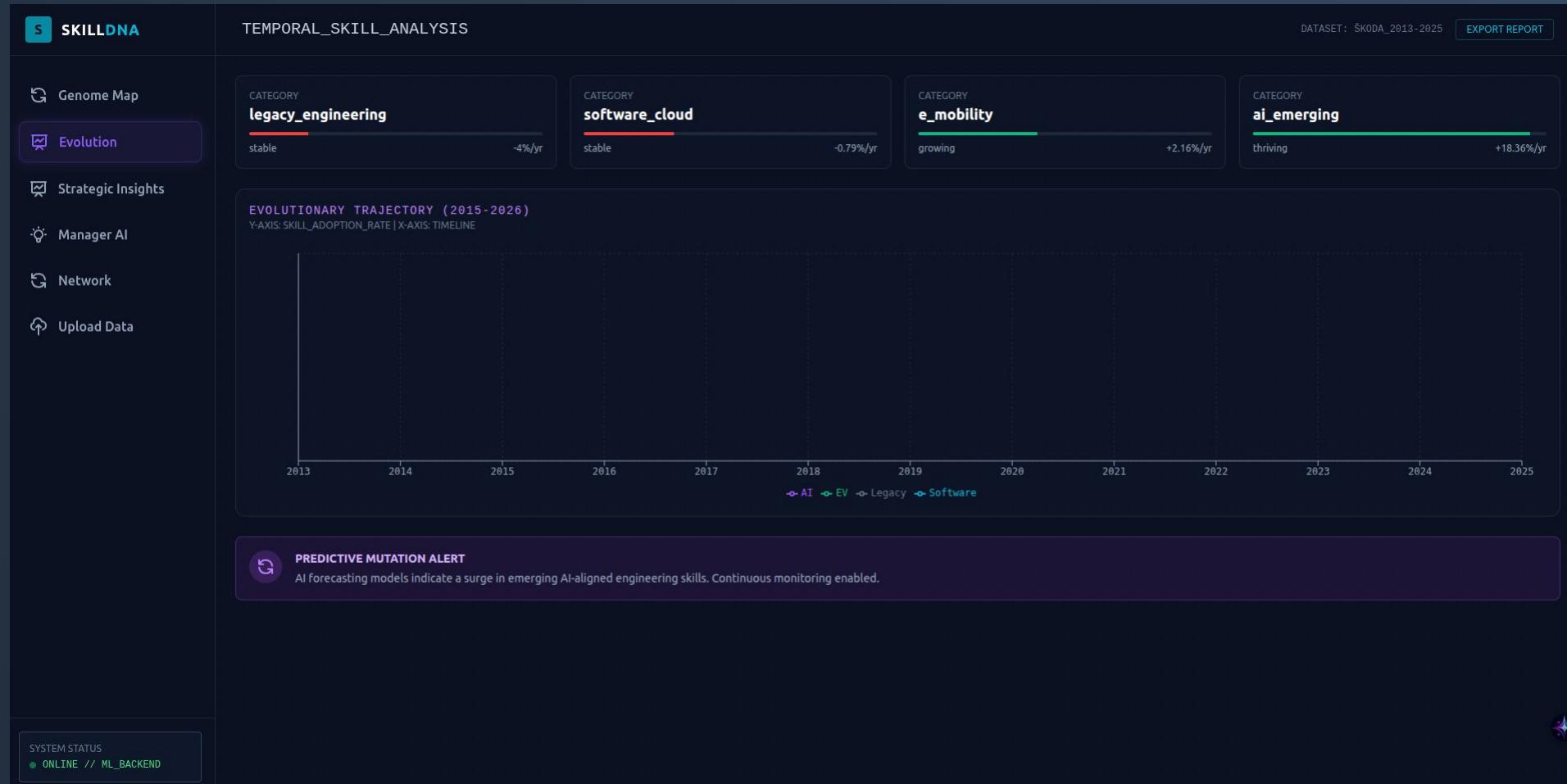
The screenshot shows the SKILLDNA software interface. At the top right, it says "DATASET: ŠKODA_2013-2025" and "EXPORT REPORT". The main header is "INTELLIGENCE_CORE_INTERFACE". On the left, there's a sidebar with a "SKILLDNA" logo and a navigation menu: "Genome Map", "Evolution", "Strategic Insights", "Manager AI" (which is highlighted with a blue border), "Network", and "Upload Data". Below the menu is a "SYSTEM STATUS" indicator showing "ONLINE // ML_BACKEND". In the center, there's a circular icon with a lightbulb symbol and the text "SKILL_DNA INTELLIGENCE". It says: "Ask about skill gaps, team diversity, or mentor recommendations based on the Škoda organizational genome." Below this are two input fields: one with "identify gaps in E-Mobility" and another with "Find mentors for Python". At the bottom, there's a button labeled "Query the organizational genome..." with a double arrow icon, and a small star icon in the bottom right corner.

THE DEMO

HOW WE CAN RUN?

THE DEMO

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THE DEMO

HOW WE CAN RUN?

S SKILLDNA

STRATEGIC_INSIGHTS_ENGINE

DATASET: ŠKODA_2013-2025 [EXPORT REPORT](#)

Genome Map
 Evolution
 Strategic Insights
 Manager AI
 Network
 Upload Data

2 High-Growth Skills
Emerging competencies with explosive demand

0 Critical Risk Skills
Rapidly declining - immediate action required

1 Thriving Categories
Skill domains with strong positive momentum

CATEGORY HEALTH ANALYSIS

Category	Status	Growth	Avg Popularity	Skills
legacy_engineering	STABLE	-4%/year	54.6%	6
software_cloud	STABLE	-0.79%/year	97.8%	9
e_mobility	GROWING	+2.16%/year	97.5%	5
ai_emerging	THRIVING	+18.36%/year	89.9%	6

⚡ EMERGING SKILLS (TOP 10)

Rank	Skill	Category	Growth	Per Year	Risk
#1	Machine Learning	ai_emerging	+25.4%	per year	HIGH
#2	PyTorch	ai_emerging	+20.6%	per year	HIGH
#3	Computer Vision	ai_emerging	+17.5%	per year	MEDIUM

SYSTEM STATUS
● ONLINE // ML_BACKEND

THE DEMO

HOW WE CAN RUN?

The screenshot shows the SkillDNA Data Upload System interface. At the top left is the SkillDNA logo. To its right is the dataset name "DATA_UPLOAD_SYSTEM". In the top right corner, it says "DATASET: ŠKODA_2013-2025" and there is a "EXPORT REPORT" button. On the far right, there is a large, semi-transparent blue rectangular overlay.

The main area features a dark background with light-colored UI elements. On the left, a sidebar contains icons for "Genome Map", "Evolution", "Strategic Insights", "Manager AI", "Network", and "Upload Data", with "Upload Data" being highlighted by a yellow border. In the center, there is a "Upload Employee Data" section. It includes a "Drag and drop CSV, Excel, or PDF files here" input field with a file icon, a "Select File" button, and a link to "Supported Formats (5 formats)". At the bottom left, a "SYSTEM STATUS" box indicates "ONLINE // ML_BACKEND" with a green dot. A small purple circular icon is located at the bottom right.

Team & Expertise



ELVİ ZEKAJ

PROJECT LEAD

AI Architecture



YUSUF ALPEREN OCAK

DATA ENGINEER

Pipeline & ETL



SENA ZELAL DEMİR

FULL STACK DEVELOPER

Dashboard & UX-UI



ŞEYMA KARACA

PROJECT MANAGER

Business Insights

GITHUB: github.com/ezekaj/ai_skoda-11-2025#