

Using data and AI to discover your competences and career opportunities

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AMSEP WAPES AMSPE



Agenda

- About VDAB
- Challenge
- The solution
- The application



About VDAB



About VDAB

- Flemish Public Employment Service
- Mission and ambition (VIBE)
 - Every talent at work, through a tailor-made co-creative matching, digitally and on the shop floor
 - A perspective on talent for every employer
 - **A career perspective and career ownership for every citizen.**
- Number of clients: 3,986 milion Flemings
- Number of staff: 5011
- Aantal kantoren?





Career perspective & ownership

The Challenge

The Challenge

- The labourmarket is complex and dynamic
 - Insight into competences and the connection to occupations is not obvious
 - Employers have difficulties to find their perfect employee
- The Current competencies don't guarantee a sustainable career

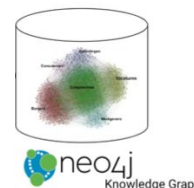
➔ **Assistance with orientation and matching is necessary**



What solutions do we need?

- For the citizen
 - Quick and easy way to build your competence profile
 - Insight into your position on the labour market
 - Insight into the current competence distance and this per occupation
 - Insight into possible career paths based on trainings
- *For the employer*
 - *Clear view of the position of vacancies, given the current pool of job seekers*
 - *Insight in how to optimize vacancies*
 - *Insight in how to optimize potential candidates based on trainings*

Jobbereik

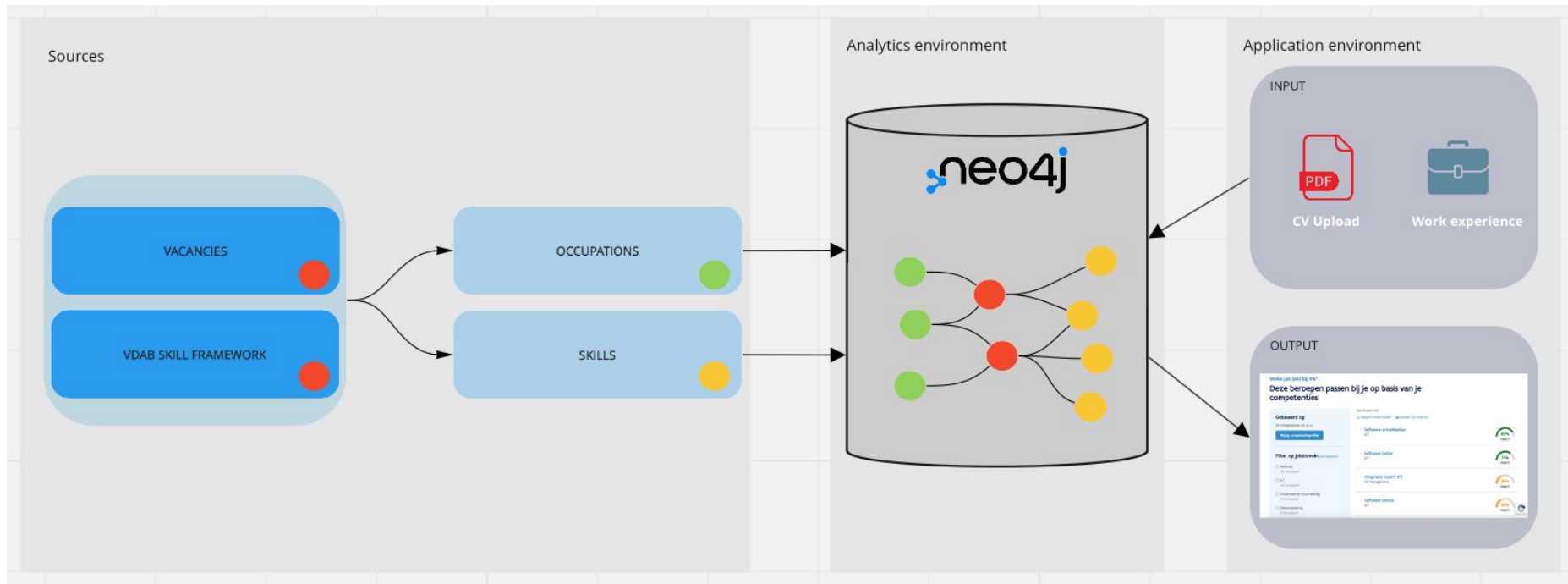




The solution

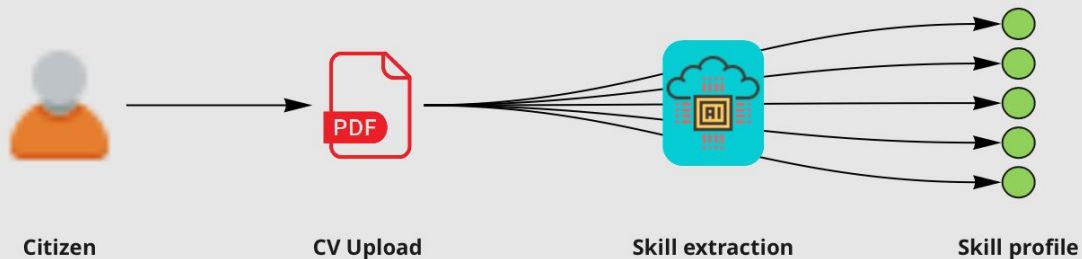


Jobbereik - from data to insights

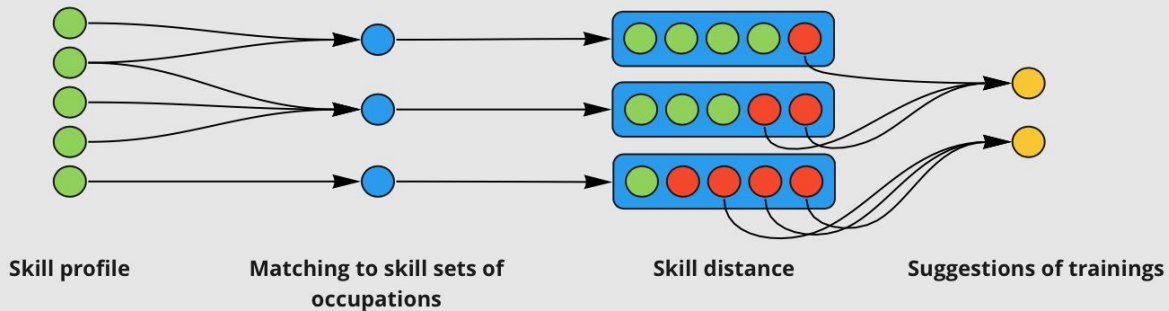


Matching skill profiles to occupations and trainings

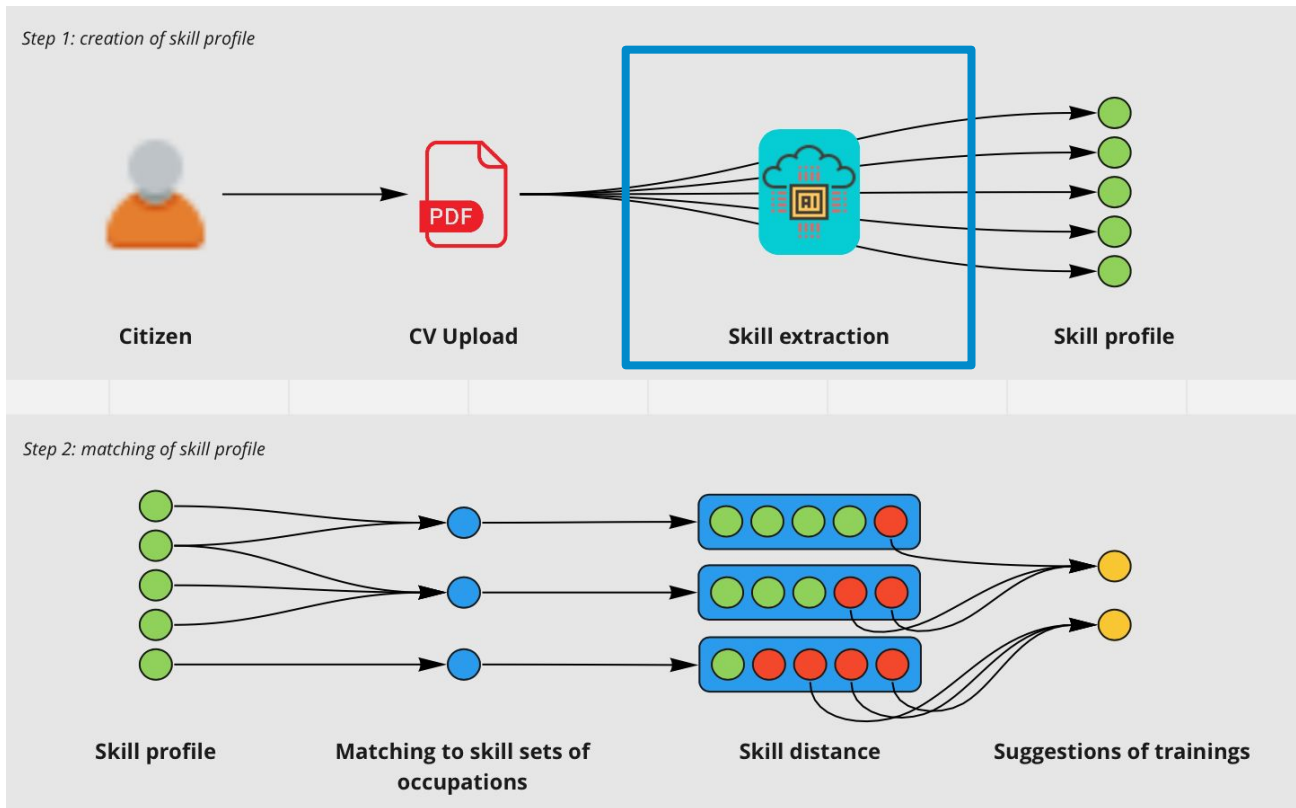
Step 1: creation of skill profile



Step 2: matching of skill profile



Matching skill profiles to occupations and trainings

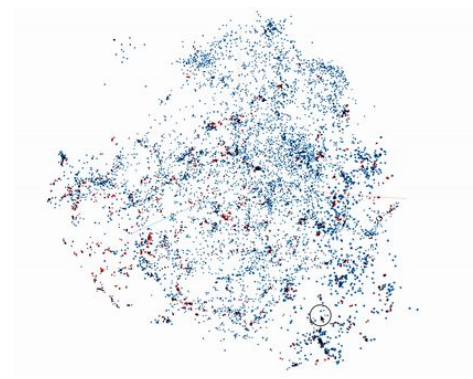


Skill extraction with the VDAB Skill Framework

“A datadriven collection of skills, detected from different sources such as vacancies, CV’s, ESCO, Competent, wikipedia ”

Components

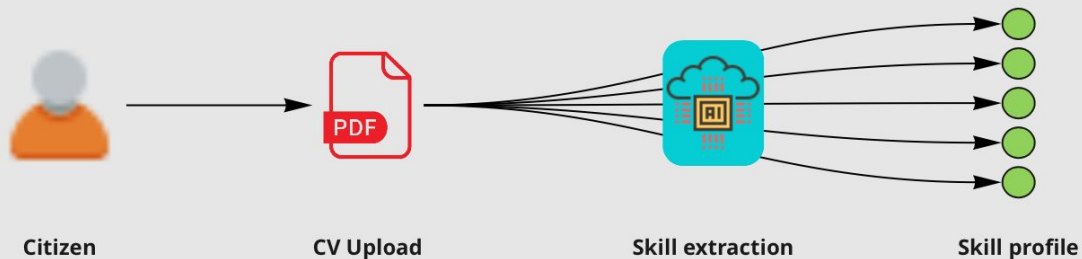
- **Skill cloud:** graph of skills
- **Skill tagger:** algorithm to extract skills out of free text
- **Skill seeker:** algorithm that identifies new skills to add to the skill cloud
- **Skill navigator:** Co-occurrence matrix and embeddings to create contextual links between the skills in the skill cloud



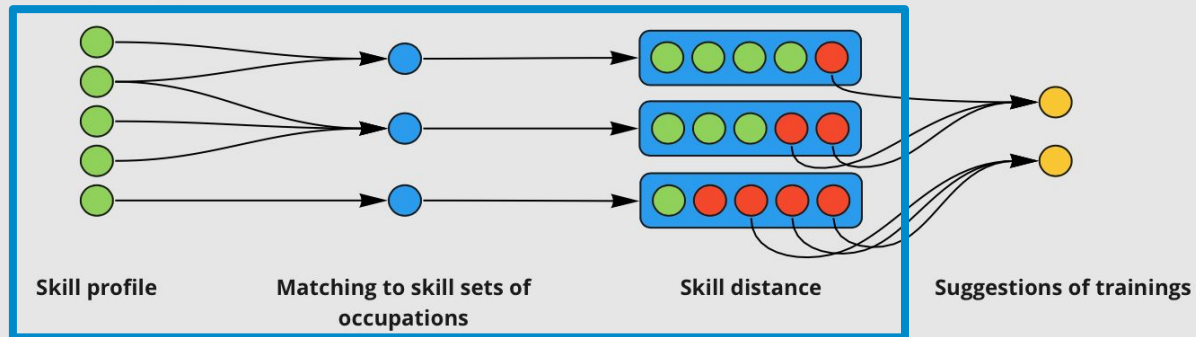
	Verpleegkunde, Verband aanleggen, EHBO, ... , Brood bakken				
Verpleegkunde	100%	99%	87%	...	0%
Verband aanleggen	99%	100%	95%	...	0%
EHBO	87%	95%	100%	...	15%
...
Brood bakken	0%	0%	15%	...	100%

Matching skill profiles to occupations and trainings

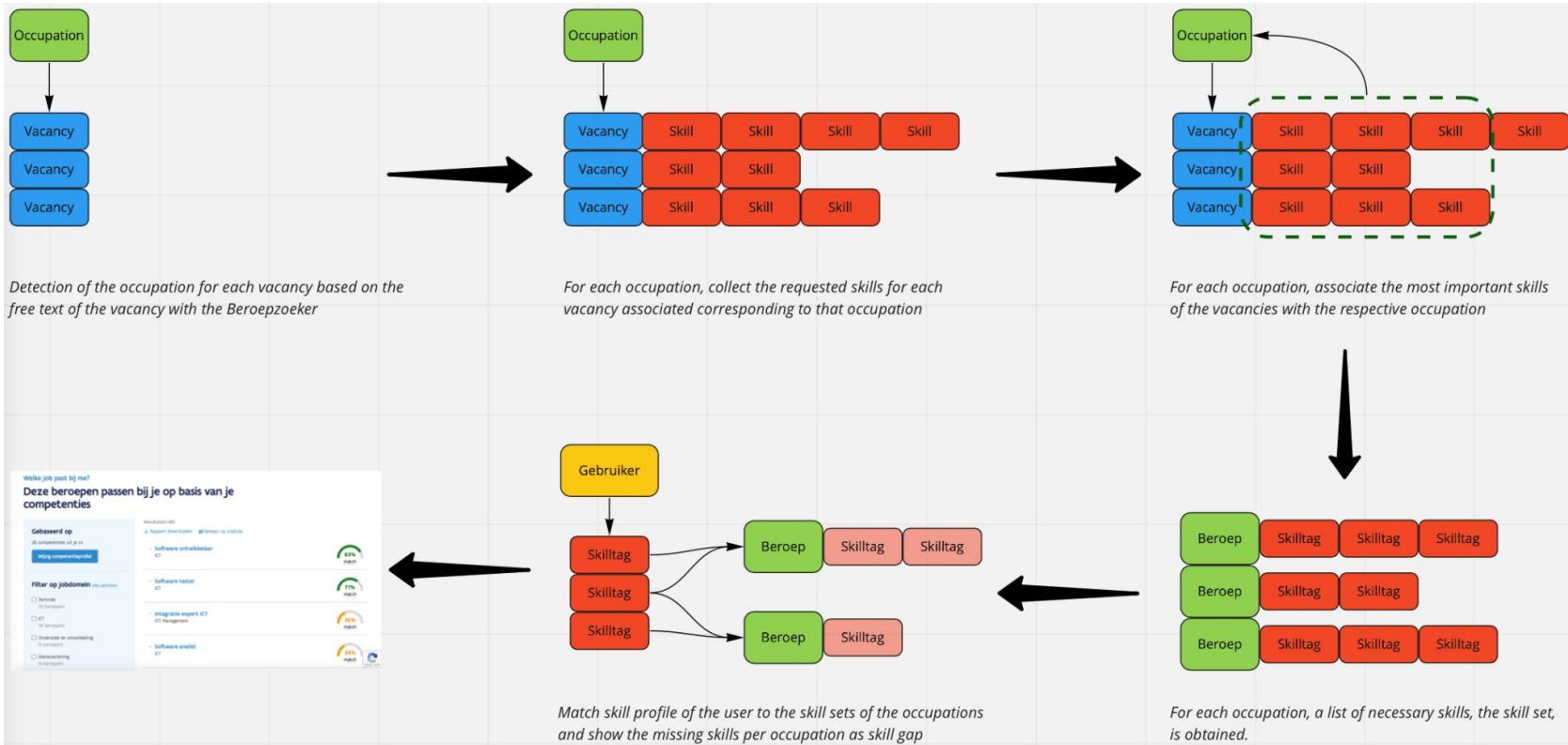
Step 1: creation of skill profile



Step 2: matching of skill profile

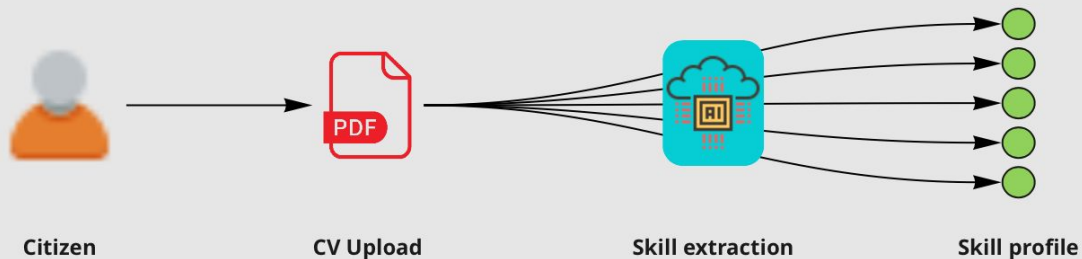


Matching of skill profile to skill sets of occupations

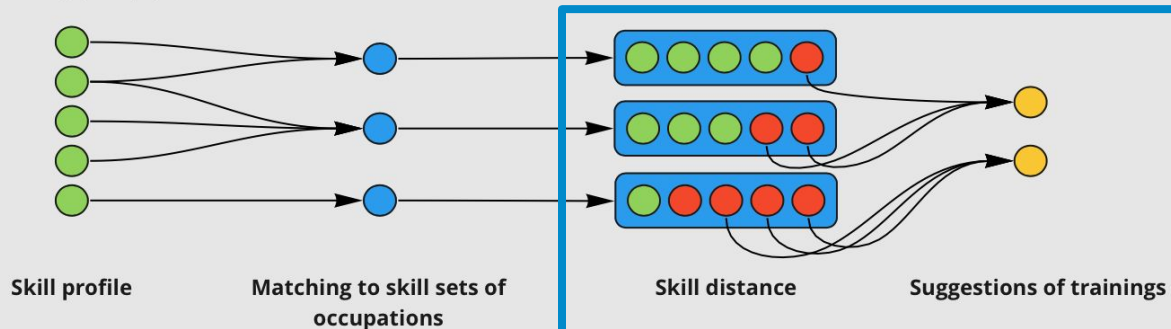


Matching skill profiles to occupations and trainings

Step 1: creation of skill profile



Step 2: matching of skill profile



Suggestion of trainings

Three sets of competences

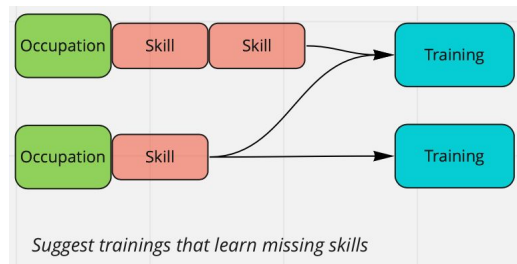
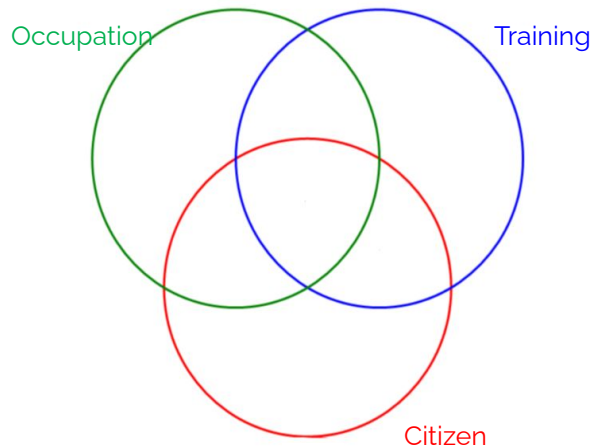
- Citizen: which skills do I already have?
- Occupation: which skills do I need ?
- Training: which skills can I learn?

Each training will be scored based on

- Which missing skills are learned?
- Number of skills in the training that the citizen already knows

Suggested trainings:

top-x with the highest score based on the skill profile and skill distance of the client





The application

Jobbereik - the application

- Link to the application: [Jobbereik](#)
- **+150,000** citizens helped
- 76% citizens are satisfied with the tool
- 25% click through to job openings of newly discovered occupations

The screenshot shows the 'Jobbereik' application interface. At the top, there's a blue header with the 'VDAB' logo and the text 'Jobbereik'. Below this, the main heading is 'Welke job past bij mij?' followed by 'Deze beroepen passen bij je op basis van je competenties'. The interface is divided into two main sections. On the left, under 'Gebaseerd op', it shows '40 competenties van Afwasser (m/v)' and a button 'Wijzig competentieprofiel'. Below this is a 'Filter op jobdomein' section with three checked options: 'Horeca, toerisme, vrije tijd en animatie (28 beroepen)', 'Bouw en openbare werken (26 beroepen)', and 'Industrie'. On the right, under 'Resultaten (150)', there are three job suggestions, each with a match percentage in a green arc: 100% match for 'Afwasser (m/v)', 76% match for 'Schoonmaker van ruimten en lokalen (m/v)', and 69% match for 'Keukenmedewerker (m/v)'. Each suggestion also includes a brief description of the job. At the bottom right, the 'VDAB' logo is displayed.

VDAB > Jobbereik

Welke job past bij mij?

Deze beroepen passen bij je op basis van je competenties

Gebaseerd op
40 competenties van Afwasser (m/v)
[Wijzig competentieprofiel](#)

Filter op jobdomein [alles deselecteren](#)

- ☒ Horeca, toerisme, vrije tijd en animatie (28 beroepen)
- ☒ Bouw en openbare werken (26 beroepen)
- ☒ Industrie

Resultaten (150)
[Rapport downloaden](#) [Opslaan op vdab.be](#)

- ▼ **Afwasser (m/v)**
Horeca, toerisme, vrije tijd en animatie
100% match
- ▼ **Schoonmaker van ruimten en lokalen (m/v)**
Diensten aan personen en aan de gemeenschap
76% match
- ▼ **Keukenmedewerker (m/v)**
Horeca, toerisme, vrije tijd en animatie
69% match

VDAB

Jobbereik - the application

Deze beroepen passen bij je op basis van je competenties

Logistiek assistent in zorginstellingen (m/v)

Hieronder vind je een overzicht van belangrijke competenties die je nodig hebt om dit beroep uit te oefenen.

Bekijk de beroepen die bij je passen (150)

Competenties

Toevoegen/verwijderen

✓ autonomie



✓ netheid



✓ flexibiliteit



✓ gemotiveerd



✓ onderhoud



✓ schoonmaak



ondersteunen




samenwerken




Opleidingen

Ontbrekende competenties kan je hier leren.

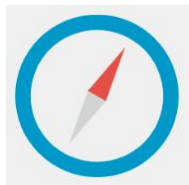
 Verkort traject tot het certificaat zorgkundige

 Logistiek assistent in de ziekenhuizen of rusthuizen

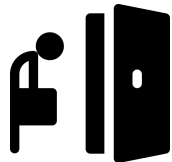
 verkort traject zorgkundige bij Diensten voor Gezinszorg (275u)

 Bijkomende opleidingsmodule tot zorgkundige bij een Dienst voor Gezinszorg

AI@VDAB - to support the citizen and the employer



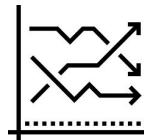
Orientation



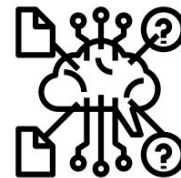
Prediction of Jobloss



Jobmap



Skill trends



Vacancy management



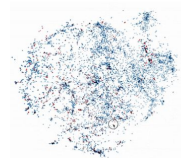
Probability to find a job



Smart tips



Careerpaths



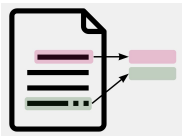
VDAB Skill Framework



White raven



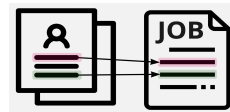
Beroepzoeker



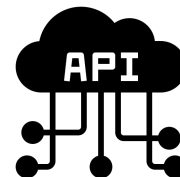
Competence scanner



Trainings



Matching



Generalization of AI application



AI@VDAB - to support the citizen and the employer



Orientation



Prediction of Jobloss



Jobmap



Skill trends



Vacancy management



Probability to find a job



Smart tips



Careerpaths



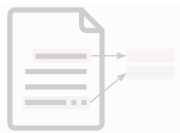
VDAB Skill Framework



White raven



Beroepzoeker



Competence scanner



Trainings



Matching



Generalization of AI application

Questions?

