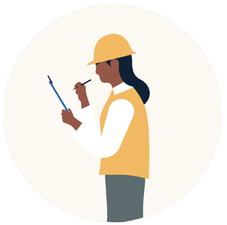
APEC – Closing the Digital Skills Gap Forum

Our Vision

Create economic opportunity for every member of the global workforce

630M

Members



30M

Companies

20M

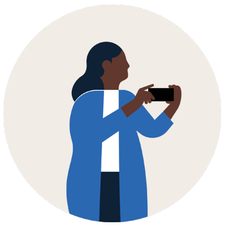
Open Jobs

35K

Skills

90K

Schools

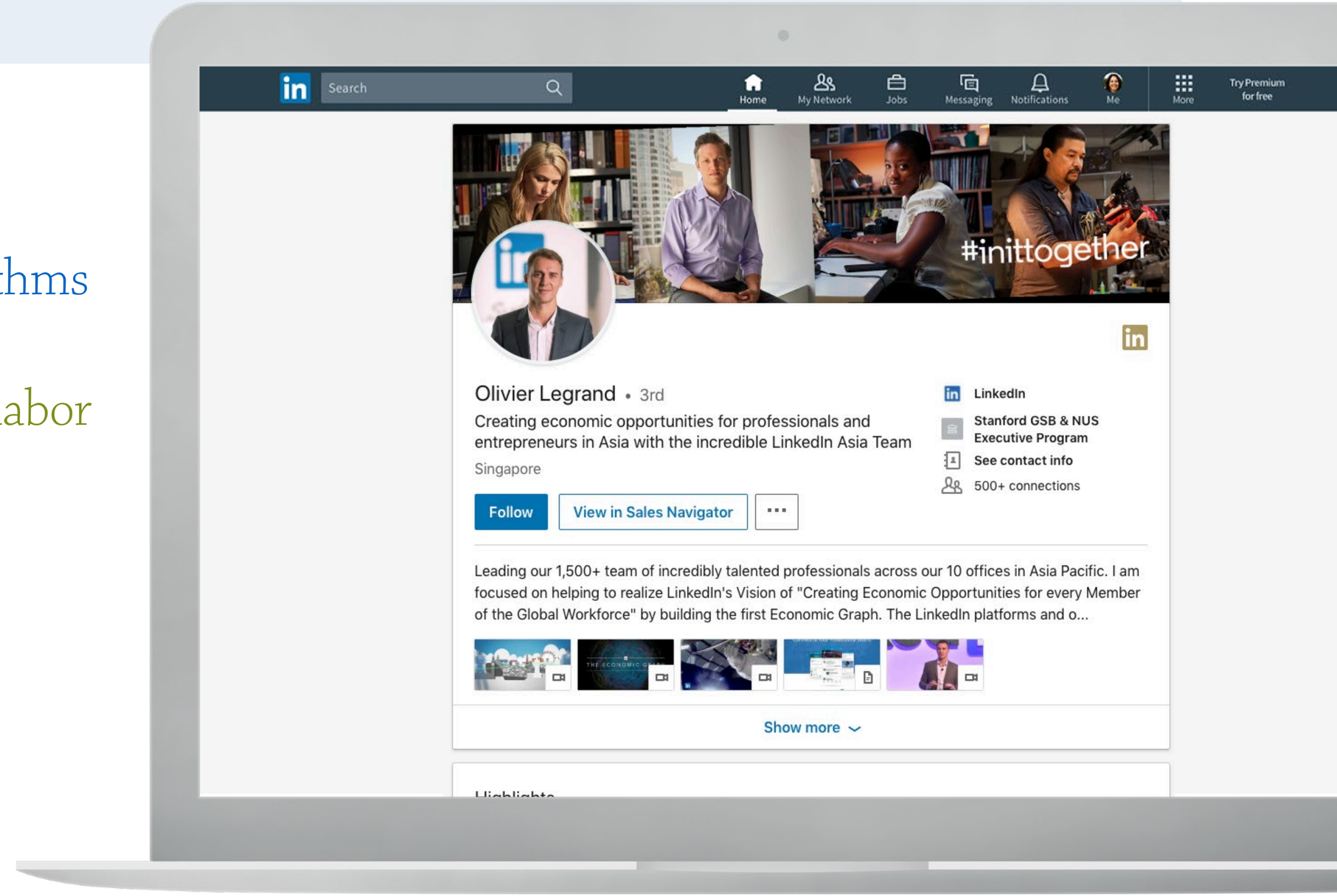


109B

Updates viewed

The Economic Graph

LinkedIn uses algorithms and data science to transform data into labor market insights



Features of LinkedIn data

Global

Compare hundreds of countries and cities

Granular

Breakdown by location, industry, occupation, etc.

Real-Time

Members constantly update their profiles

Historical

Monitor data – like migration patterns – over time

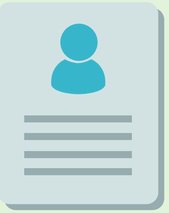
AI Talent:
Who, Where, What?

“

AI and emerging technologies will have an impact on the global workforce, no matter where we live and work.

THE LEVEL OF IMPACT BASED ON

Industry



Occupations

Country

It is important to understand what
is the lay of the land for AI.

And for each country to understand it's local
challenges and design suitable interventions.

Closing this gap in the
foreseeable future.

Identifying AI talent

Model Input

LinkedIn Member Profile

Title

Skills

Position Description

Keywords

neural networks

scikitlearn

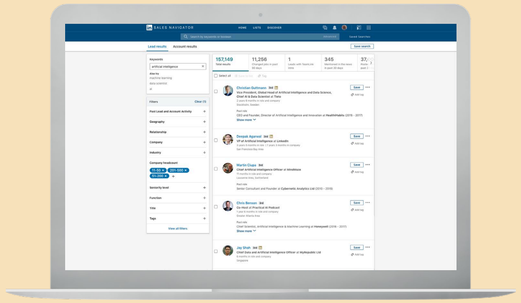
theano

machine learning

artificial intelligence

deep learning

scikit-learn



reinforcement learning

tensorflow

caffe

scikit

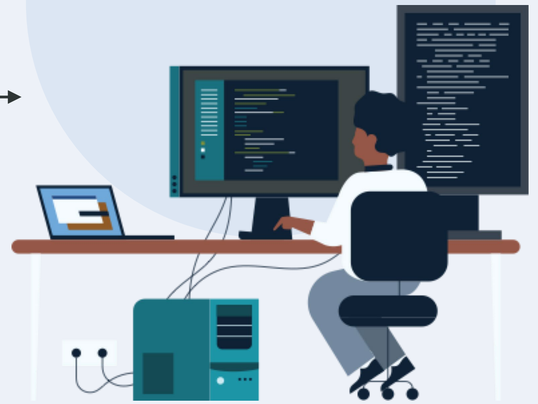
cntk

computational intelligence

Model

Text classifier

Machine learning approach

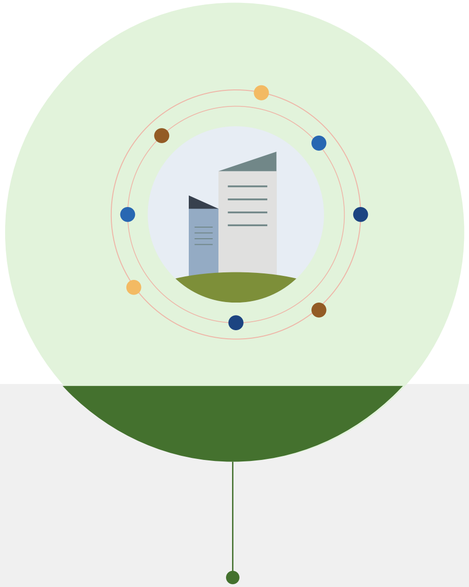


Output

AI Professional

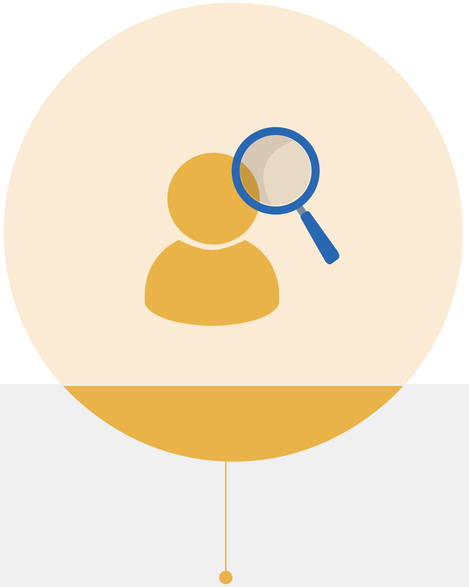
Non-AI Professional

AI Talent: Who, Where, What?



Industry Insights

Professional Attributes



Demographics

Proportion of AI Talent in each country

United States
(San Francisco) 1.65%

Singapore 0.38%

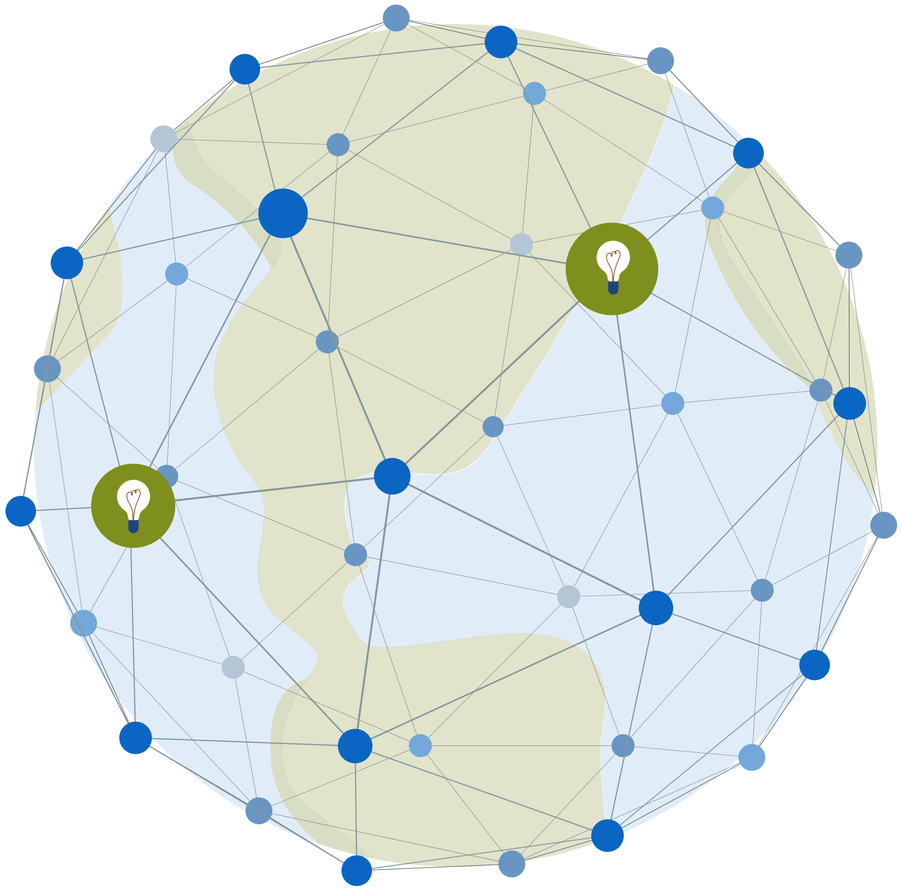
Australia 0.18%

Canada 0.17%

Malaysia 0.10%

Top Industries where AI talent work

INDUSTRY INSIGHTS



Australia

- Software & IT Services
- Education
- Hardware & Networking
- Manufacturing
- Finance

Singapore

- Education
- Software & IT Services
- Hardware & Networking
- Manufacturing
- Finance

United States

- Software & IT Services
- Hardware & Networking
- Consumer Goods
- Education
- Manufacturing

Canada

- Software & IT Services
- Education
- Hardware & Networking
- Manufacturing
- Entertainment

Malaysia

- Software & IT Services
- Education
- Hardware & Networking
- Manufacturing
- Energy & Mining

Key insight:

There are localized differences in the focus area for AI - Software & IT is the generally the top industry where AI talent works, with exception of Singapore where Education tops the charts.

Most Common Roles of AI talent in various industries

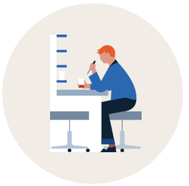
PROFESSIONAL ATTRIBUTES

1 Software & IT Services

1. Software Engineer
2. Data Scientist
3. Full Stack Engineer

2 Education

1. Researcher
2. Assistant Professor
3. Research Assistant



3 Hardware & Networking

1. Software Engineer
2. Engineer
3. Data Scientist

4 Manufacturing

1. Software Engineer
2. Engineer
3. Project Engineer

5 Finance

1. Software Engineer
2. Data Scientist
3. Analyst

Key insight:

For Tech, Manufacturing and Finance industries, AI talent takes up software engineering and data scientist roles, while for Education there is more academia focus with AI talent taking up researcher and professor positions.

Top 10 skills unique to AI talent in each country

PROFESSIONAL ATTRIBUTES

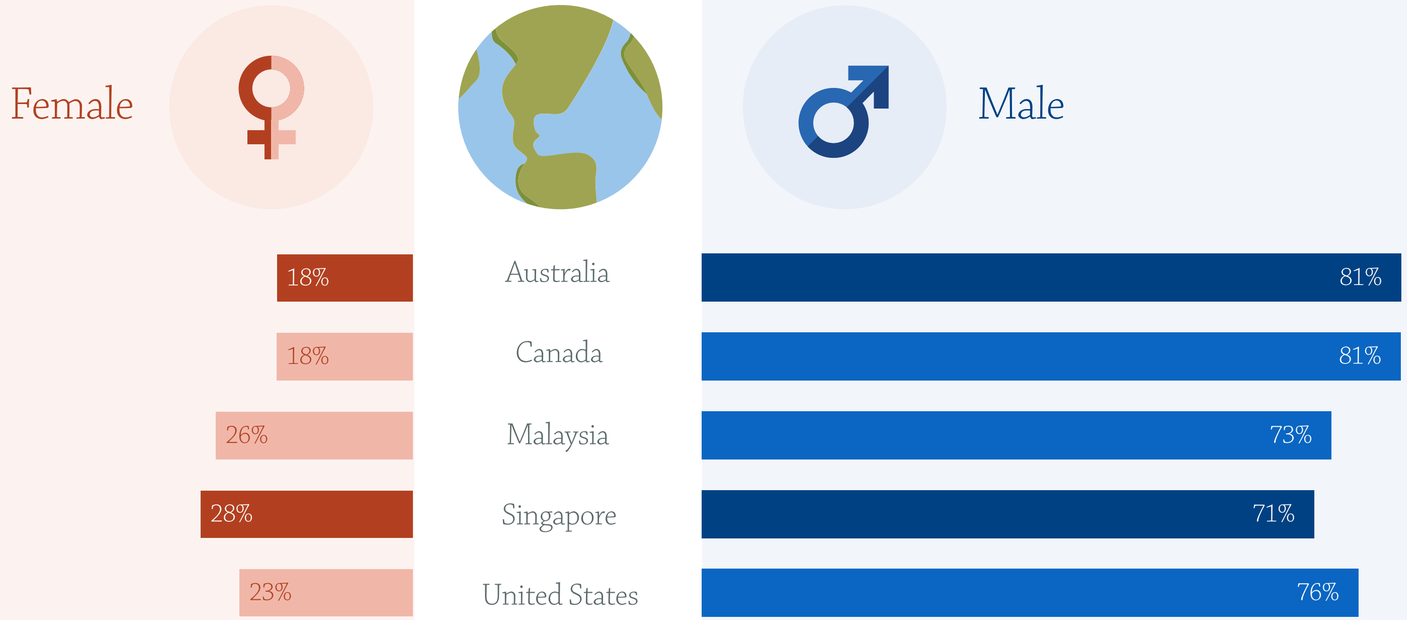
	 Australia	 Canada	 Malaysia	 Singapore	 United States
#1	Python (Programming Language)	Python (Programming Language)	Python (Programming Language)	Python (Programming Language)	Python (Programming Language)
2	Machine Learning	C++	C++	Machine Learning	Machine Learning
3	Data Analysis	Machine Learning	Machine Learning	C++	C++
4	SQL	Java	Java	Java	Java
5	Java	SQL	Matlab	Data Analysis	SQL
6	Research	C (Programming Language)	Research	C (Programming Language)	C (Programming Language)
7	C++	Data Analysis	JavaScript	SQL	Linux
8	Programming	Matlab	C (Programming Language)	Matlab	Software Development
9	Matlab	JavaScript	Data Analysis	JavaScript	JavaScript
10	Software Development	Research	Programming	Programming	Data Analysis

Key insight:

7 out of the top 10 pertinent skills possessed by AI professionals are programming languages.
Python is the most popular coding language amongst AI professionals with about 35% listing it.

The split between male and female AI talent

DEMOGRAPHICS

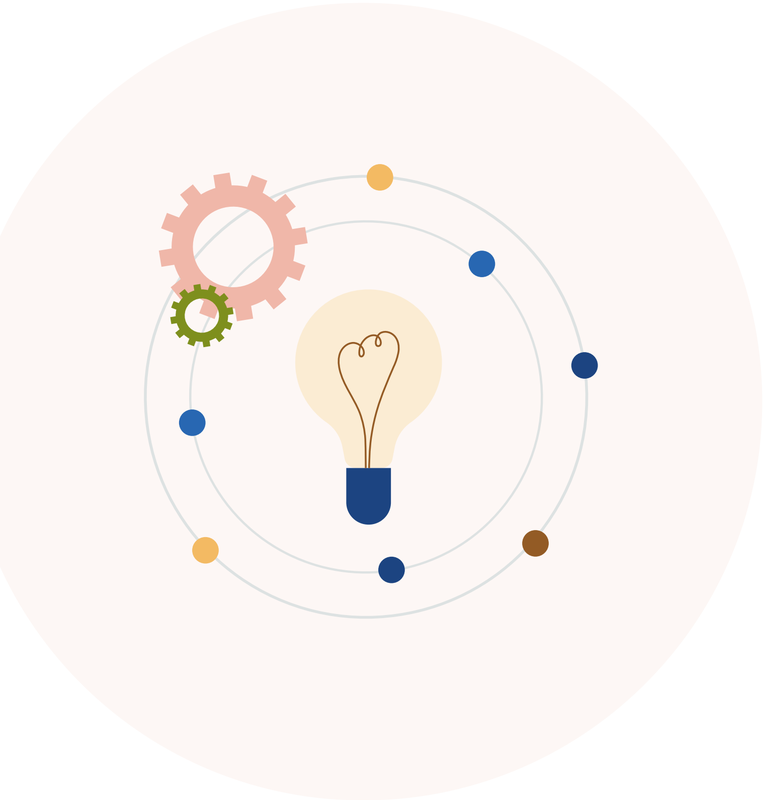


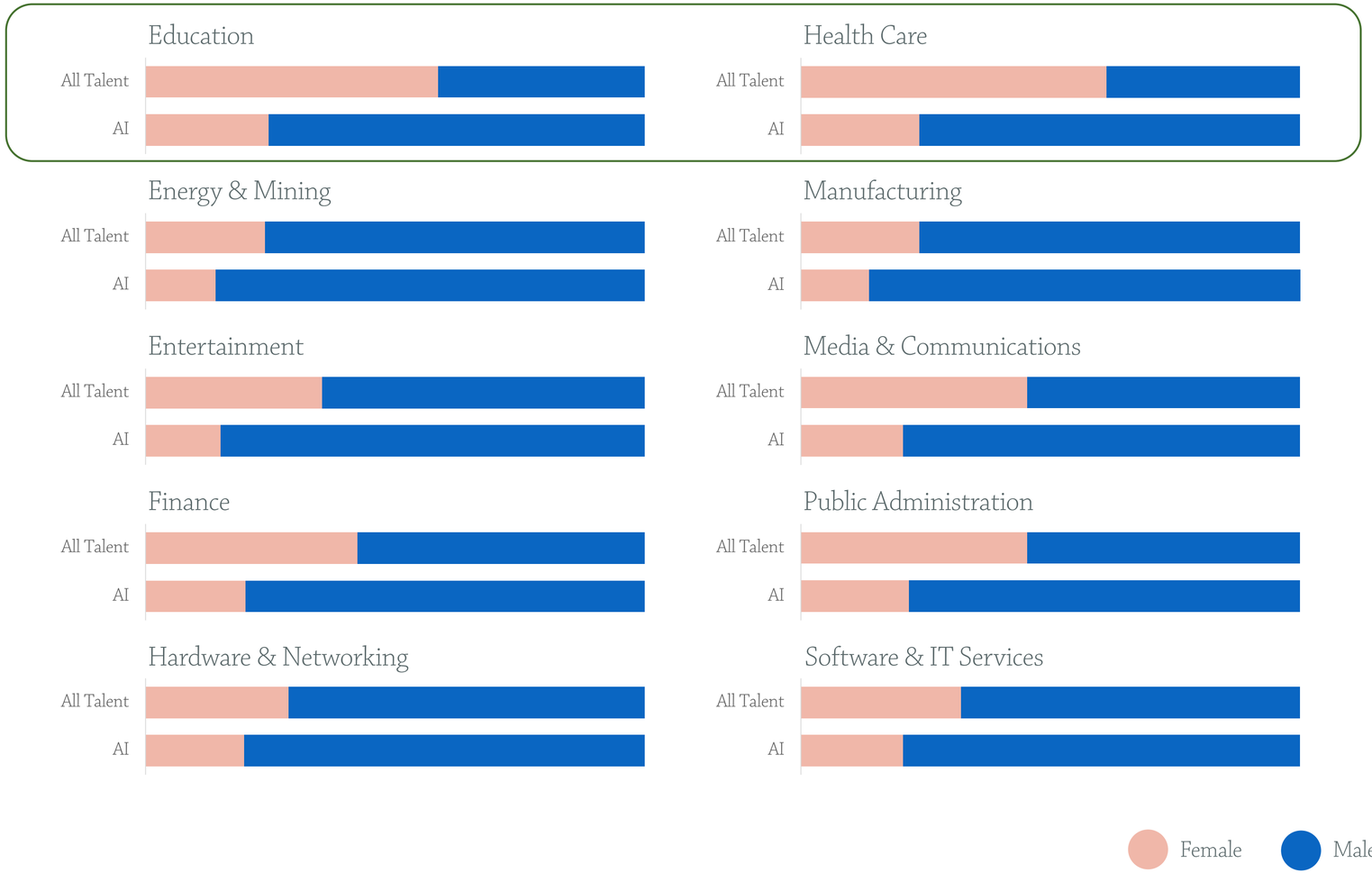
Key insight:

There is a stark gender gap - **only 20%** of the AI professionals are female.

The gender split across different industries

DEMOGRAPHICS





Key insight:

AI gender gap is wider than the general gender gap in each industry, indicating gender imbalance within AI. This is seen even in industries like Education and Healthcare, which are traditionally popular with female professionals.

Summary

- With AI becoming prominent even in non tech industries, we need to start thinking of industry specific interventions to prepare the workforce.
- Apart from tech skills in AI, soft skills remain important to navigate the uncertainty and constant changes in the labour market.
- Interventions may also be necessary to avoid perpetuating the gender gap.
- In collaboration with governments and public sector organisations, insights from private organisations can be highly valuable in understanding the labour market trends and preparing for the future of work.

Thank you