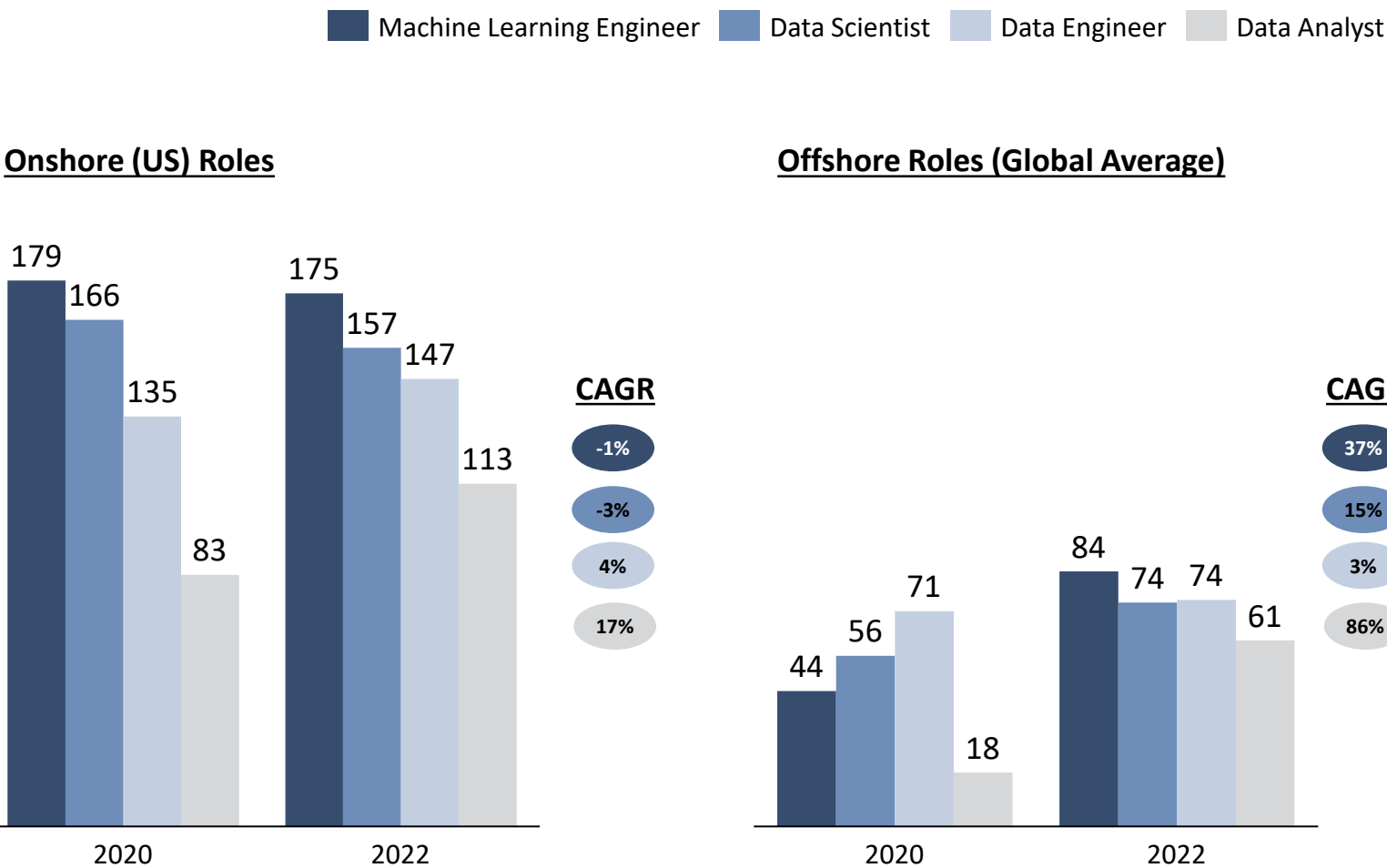# Executive Summary

Purpose of analysis, recommendation and phasing

- Companies often struggle to differentiate between the critical roles in analytics: Data Analyst, Data Engineer, Data Scientist, and Machine Learning Engineer(MLE). First, we will consider the key differences between the roles and their relevance for our scaling organization

- For small to medium-sized enterprises (SMEs), onshore roles typically offer salaries twice as high as offshore positions, although outsourced countries have seen significant salary growth of 35-40% annually from 2020 to 2022

- This report recommends that the CEO establish an analytics function by hiring a Senior Expert Level Data Scientist and a Mid-Level Data Engineer, both based in the U.S. The estimated total cost for these roles, including overhead, is around $250,000 to $300,000

- Once the value of a dedicated analytics function has been demonstrated, we suggest looking to local talent to strengthen the team

- Canada, Great Britain, France and Spain present attractive offshoring destinations with a cost-effective and highly educated workforce

Knowing the key roles in data science helps us identify which job titles to prioritize for the first hires

On and offshore data and analytics salaries, by job title for SMBs[1], 2020-2022, US$000s

■ Machine Learning Engineer ■ Data Scientist ■ Data Engineer ■ Data Analyst

Onshore (US) Roles

2020
- 179
- 166
- 135
- 83

2022
- 175
- 157
- 147
- 113

CAGR
- -1%
- -3%
- 4%
- 17%

Offshore Roles (Global Average)

2020
- 44
- 56
- 71
- 18

2022
- 84
- 74
- 74
- 61

CAGR
- 37%
- 15%
- 3%
- 86%

1. Small and medium-sized businesses 2. DataCamp, Coursera

Key Roles and Descriptions[2]

Data Analyst: Gathers, cleans, and analyzes data to answer business questions, presenting results in reports or dashboards

Data Engineer: Builds and maintains databases and large-scale processing systems; primarily responsible for data integrity

Data Scientist: Performs descriptive statistics and analysis to develop insights, build predictive models and solve a business need

Machine Learning Engineer: Creates software to deploy and maintain machine learning models that enable computers to utilize company data for generating insights

Takeaways

- While roles in the data ecosystem may sound alike, they have distinct responsibilities that should be considered when hiring

- Onshore positions typically pay ~2x more than offshore, though offshore salaries have increased 30-40% p.a. from 2020-2022
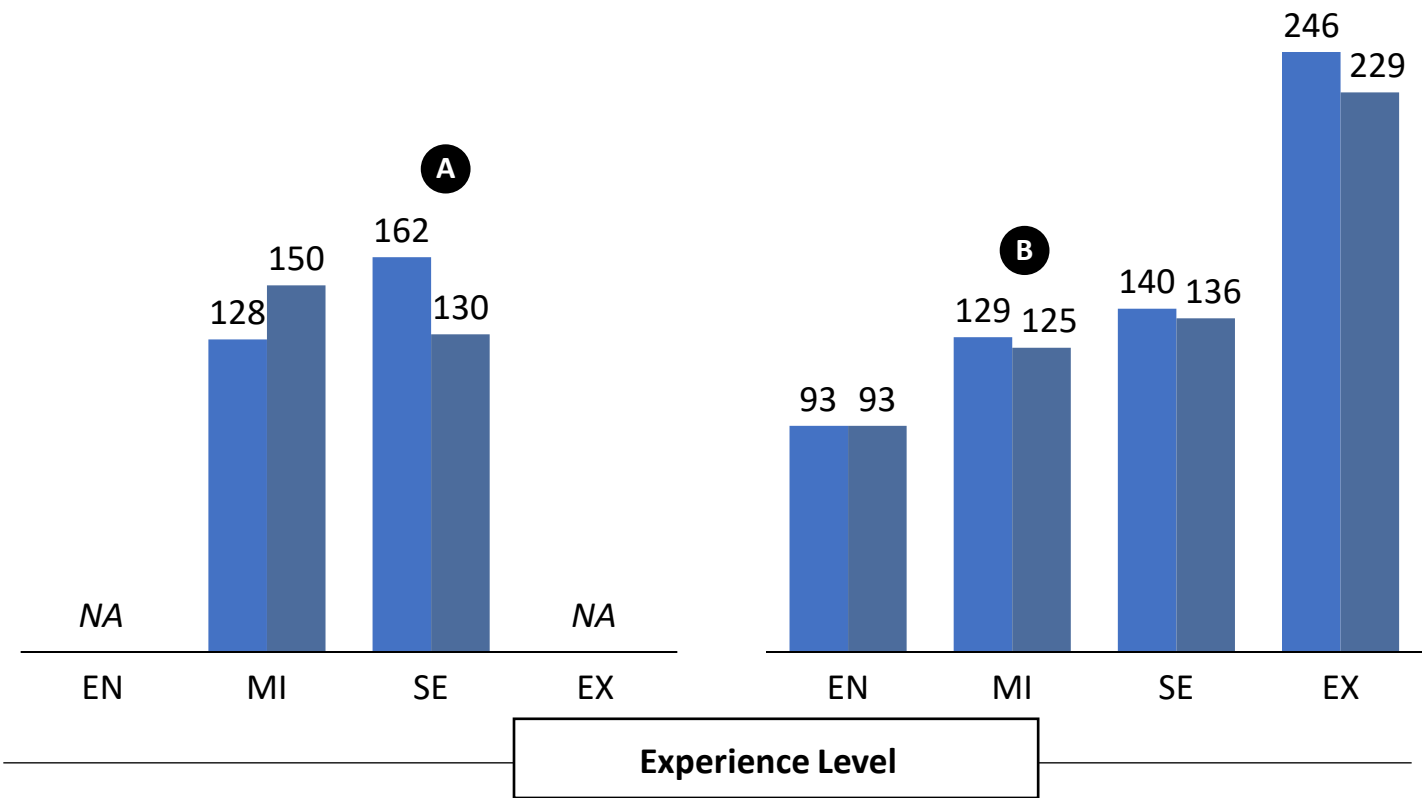
This report recommends establishing an internal analytics unit with two US-based FTE: a mid-level Data Engineer and a Senior Data Scientist

US Data Scientist and Engineer salaries, by experience level[1], 2022, US$000s   ■ Mean   ■ Median

Data Scientist
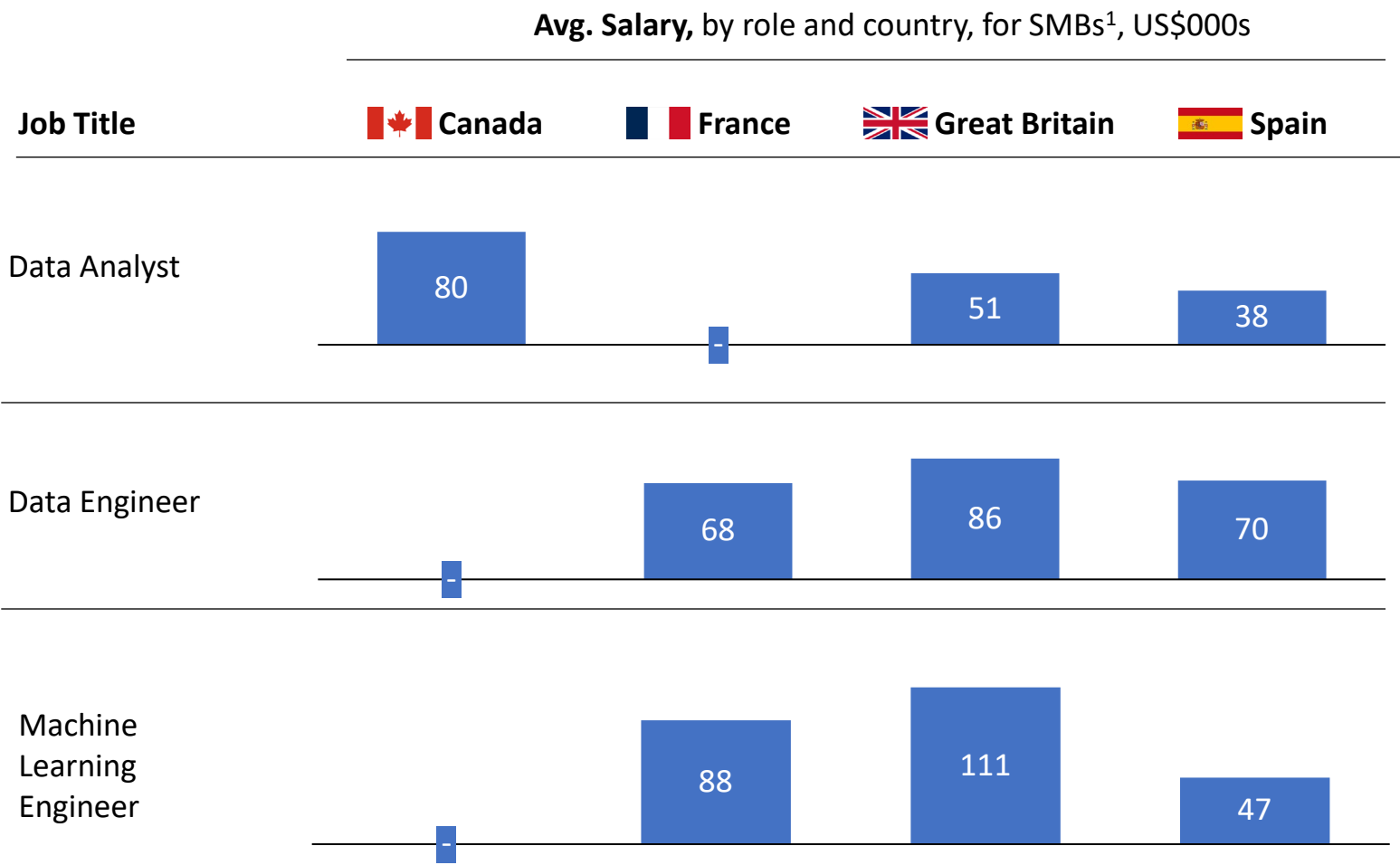
Data Engineer

Experience Level

Rationale

(A) The CEO should hire a senior Data Scientist with experience in small to medium-sized companies as a foundational hire

(B) Additionally, a mid-level Data Engineer should be hired to ensure the company's data is secure, structured and suitable for analysis

- Prioritizing local hires, even if they are remote, reduces communication errors from cultural and time zone differences, which helps gain company buy-in

- In 2022, U.S. senior Data Scientists earned $130,000 to $165,000, while mid-level Data Engineers earned $125,000 to $130,000

- Total costs for building out this function are expected to be between $250,000 and $300,000

1. EN Entry level, Junior MI Mid-level, Intermediate SE Senior-level, Expert SE Executive Level / Director **2.** e.g., an estimated 20% for overhead expenses (e.g., benefits, payroll taxes)

The CEO should look globally for talent to scale the function; Canada, France, Great Britain and Spain provide attractive offshore locations

Avg. Salary, by role and country, for SMBs[1], US$000s

Job Title	🇨🇦 Canada	🇫🇷 France	🇬🇧 Great Britain	🇪🇸 Spain
Data Analyst	80	-	51	38
Data Engineer	-	68	86	70
Machine Learning Engineer	-	88	111	47

Key Takeaways

- The CEO should consider offshore candidates when looking to scale the analytics function

- With the unit's culture established through local full-time employees (FTEs), the primary focus should be on capability building, which can be achieved cost-effectively through global talent

- One FTE should be considered from the following categories: Data Analyst, Data Engineer, and Machine Learning Engineer

- The cost savings from offshoring enable the CEO to target mid-level roles with small to medium-sized business (SMB) experience

- Canada, France, Great Britain, and Spain are viable offshoring options due to their political stability, developed infrastructures, and large, educated, English-speaking populations

- Average salaries for Data Analysts range from $40,000 to $80,000; Data Engineers command between $65,000 and $85,000; and Machine Learning Engineers typically earn between $50,000 and $120,000

1. Small and medium-sized businesses

Resources to consider when hiring global technical talent

Resource Type	Description	Pros	Cons
Recruitment firms	• 3rd party companies who source candidates on your behalf	• CVs you receive are often well-screened • Recruitment agencies often have robust candidate pipelines and knowledge of where to seek top talent	• Expensive; agencies can charge more than 30% of a candidate's first-year salary • Recruiters may prioritize their commissions over optimal candidate selection
Global hiring partners	• Platforms / Services to hire and manage global employees	• Always compliant local labor laws • Hire global FTE without creating an entity in each location • Simplified employee payments and expense/benefits management	• Cost per FTE can be expensive for initial global hires • Constant reliance on a third party

Sample Recruitment Firms

- Korn Ferry
- IQ Partners
- Randstad
- Hacker Rank
- Nexus IT
- Data Space

Sample Global Hiring Partners

- Deel
- Remote.com
- Globalization Partners
- Papaya Global
- Rippling

Source: Google Search, company websites