

ENHANCING LEAD GENERATION THROUGH

BIG DATA & ARTIFICIAL INTELLIGENCE



THE ROI STORY



THE ROI STORY



THE ROI STORY



TARGET INDUSTRY
& BENCHMARK
ASSESSMENT



LEAD GENERATION
& INVESTMENT
ATTRACTION



IN-MARKET
REPRESENTATION



MODERN ECONOMIC
DEVELOPMENT
TRAINING



BUSINESS RETENTION &
EXPANSION

THE HISTORY OF LEAD GENERATION



LEAD GENERATION 101

1. YELLOW PAGES
2. COMPANY LISTINGS
3. BUILD TARGET COMPANY PROSPECT LIST
4. MEETINGS / SITE VISITS
5. TRADE SHOWS
6. MAILERS

REACTIVE!





NAVIGATING A COMPLEX PROCESS

LOCAL INDUSTRY TARGET STRATEGY

TRADITIONAL LEAD GENERATION PROCESS



CHALLENGES: SIZE VS GROWTH



- Almost half of all large companies (\$1B+) in 2025 will be new ones, many will be faster-growing gazelles (McKinsey&Company)
- Public companies are shrinking in terms of employment

CHALLENGES: IDENTIFYING LEADS

- **Gazelles** represent less than 5% of all firms; something true for most countries BUT they represent over 60% of newly created jobs
- You can find them in all regions, all industries
- They are only part of the puzzle: **Greenfield expansions vs high growth**

FINDING GROWTH COMPANIES





FINDING THE SIGNALS

- **Divestiture / acquisitions**
- **Joint Ventures**
- **SEC Filings**
- **Workforce analysis**
- **Company time series data**
- **Spike in job posting intensity**
- **Strong employee benefit**
- **Website translated**
- **Patent applications**
- **Company hierarchies**
- **Social media activity**
- **Recent expansions**
- **Growth in revenue and staff**
- **Change in C-level staffing**
- **Recruitment of senior resources in non-traditional markets**
- **New or changed addresses**

“THE WORLD’S MOST VALUABLE RESOURCE IS NO LONGER OIL, BUT DATA”

The Economist, May 2017

BIG DATA – WHATS THE BIG DEAL

- NO clear **definition** but usually refers to:
 - Very large and/or very complex/”messy” datasets that require significant computer programming expertise to reveal patterns or anomalies
- What it does **not** mean
 - Pure repackaging of available data with new webtools - data-driven economic development is not new! (Farmer’s Almanac of 1793)

BIG DATA – WHATS THE BIG DEAL

- Developments in **Hardware** allow us now to process information from sources such as social media platforms, satellite imagery, news
- We can learn about **socio-economic activity** that was previously hidden, can improve product offerings and track events in real time
- But the **challenge remains to identify current patterns** that are of value to the user

ARTIFICIAL INTELLIGENCE & BIG DATA SYNERGIES

- **AI** IS A PROMISING WAY TO ANALYZE BIG DATA:
 - AI = DESIGN AND STUDY OF INTELLIGENT COMPUTER SYSTEMS EXHIBITING THE CHARACTERISTICS OF HUMAN BEHAVIOR
- **GOAL** = BETTER SIMULATE AND PREDICT HUMAN DECISION MAKING

**AI WITHOUT BIG DATA WAS NOT ABLE TO
PROGRESS & BIG DATA NEEDS AI TO GET
THE MOST USE OUT OF IT**

HISTORY OF AI

TESTS AND COMPARISONS
TO HUMAN/ANIMAL SUBJECT
DECISION MAKERS

1956

1960-70'S

1980-2010
'S

EARLY AI
DEVELOPMENTS AND
THE BIRTH OF
COGNITIVE SCIENCE

APPLICATIONS TO
ECONOMICS, FINANCE,
AND BUSINESS



HISTORY OF AI & APPLICATIONS TO ECONOMICS AND BUSINESS

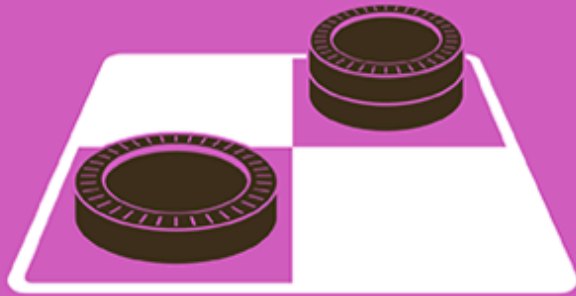
BEYOND 2010

**APPLICATIONS WITH
'DEEP LEARNING' TO BIG
DATA + IMPROVED
HARDWARE**



ARTIFICIAL INTELLIGENCE

Early artificial intelligence stirs excitement.



MACHINE LEARNING

Machine learning begins to flourish.



DEEP LEARNING

Deep learning breakthroughs drive AI boom.



M. Copeland (2016)

CURRENT STATE OF AI

GAZELLE RATINGS – MACHINE LEARNING



HOW DO YOU KNOW THIS IS A GIRAFFE?

- YOU REMEMBER PICTURES OF GIRAFFES
- YOU KNOW AND RECOGNIZE THE ENVIRONMENT GIRAFFE'S LIVE IN
- YOU DISCOUNT THE FACT THAT THE SHAPE IS NOT WHAT YOU EXPECT
 - THIS IS HOW YOUR BRAIN PROCESSES DATA
 - THIS IS WHAT MACHINE LEARNING IS BASED UPON

Drivers common to both manufacturing and services

- Venture capital
- Debt Ratios

Drivers particular to manufacturing

- Patent activity

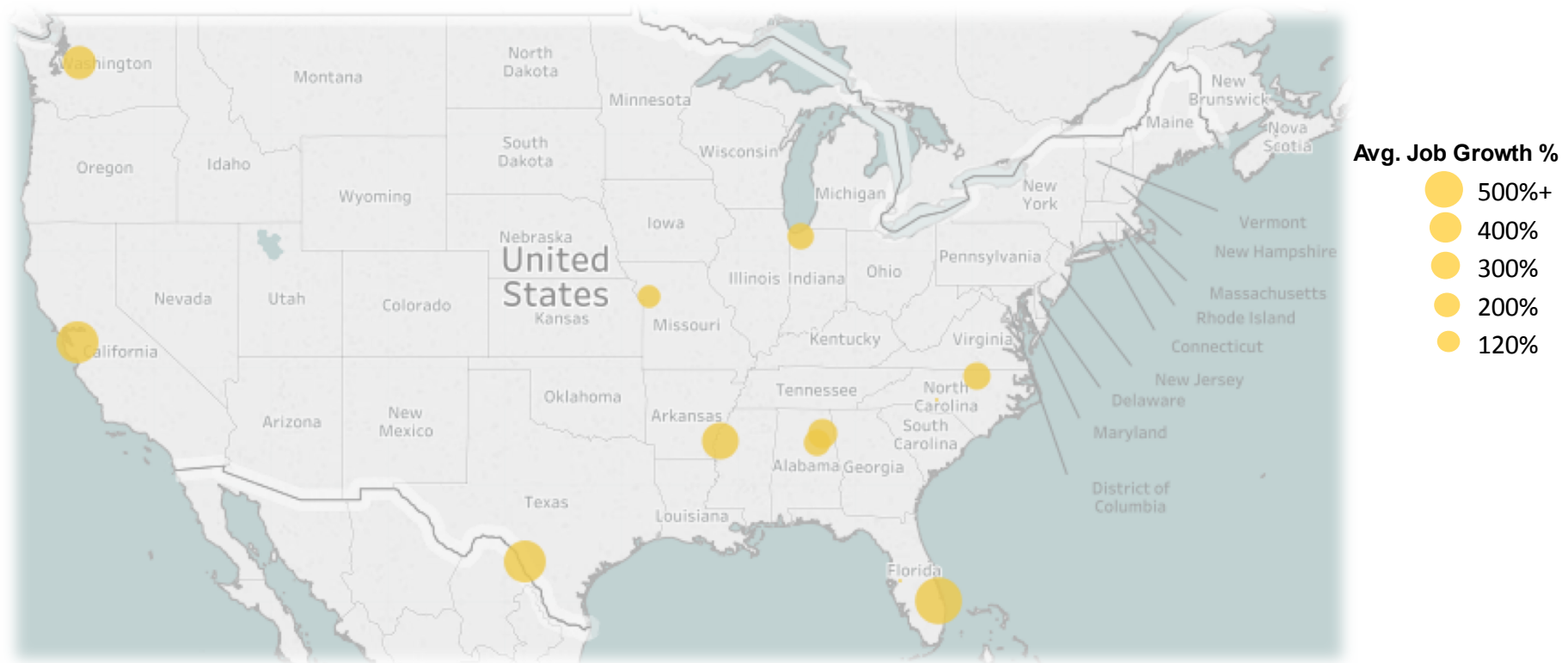
Drivers particular to services

- Number of establishments in an industry

**WHAT DOES
GAZELLE.AI
TELL US
ABOUT
DRIVERS OF
EXPANSION?**

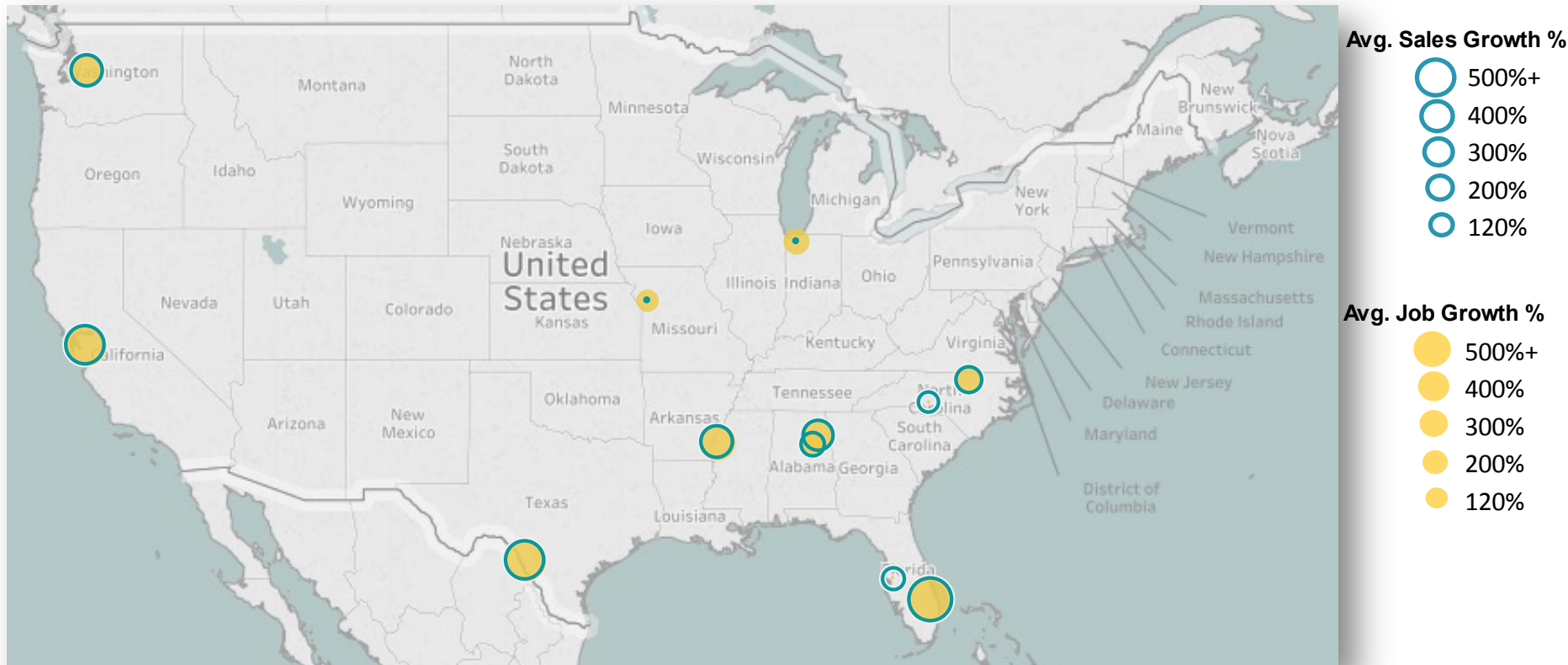
Combining AI & Industry Intelligence

Case Study: Top Job Growth Locations for Automotive Interiors over the past 2 years



Combining AI & Industry Intelligence

Job Growth + Sales Growth = New Locations



IDENTIFYING LEADS

GOAL: PREDICT COMPANY EXPANSION ANNOUNCEMENTS 1-2 YEARS AHEAD

METHOD:

- TEST MODEL ON ACTUAL PAST EVENTS
 - WHAT YOU ARE AIMING FOR IS AN IMPROVEMENT IN YOUR “CONVERSION RATE”, NOT TO ACADEMICALLY EXPLAIN EVERY SINGLE EVENT NOR CONFIRM SOME THEORY
- LET THE DATA DO THE TALKING
 - INCLUDE AS MUCH INFORMATION AS POSSIBLE – BIG DATA
 - MEANS TRADITIONAL STATISTICAL TECHNIQUES WON'T WORK

LIMITATIONS & CHALLENGES OF BIG DATA & AI

- Data Cleaning
- Continuously Updating Data
- Bleeding-edge Ai Deployments
- Transforming Results Into User-friendly / Actionable Results



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5

WAYS WE
MONITOR
GROWTH

VC
TRACKING

FEATURED
LISTS

VALIDATED
EXPANSION
PROJECTS

HEAT MAPPING

AI

WHAT DISTINGUISHES ROI'S USE OF AI?

- Unique Custom database
- Multiple Applications of ML
- Custom designed ML algorithms
- Comparison to traditional statistical predictions
- Hardware & software resources reflecting the industry state of the art
- Validation – Humanly verified expansion events

THANK YOU!

www.gazelle.ai

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