# A.I. SPECIAL REPORT

JULY 2018 FORTUNE.COM

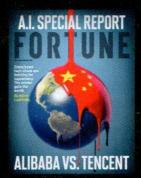
ASIA PACIFIC EDITION

China's two tech titans are battling for supremacy. The winner gets the world.

By Adam Lashinsky

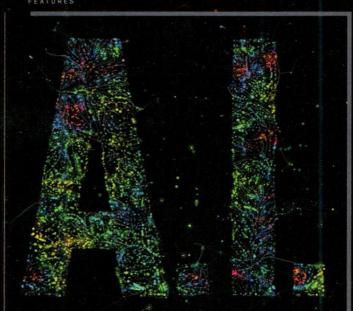


JULY 1, 2018



A ON THE COVER: ILLUSTRATION BY JUSTIN METZ

O A.I. ILLUSTRATION BY DANIL KRIVORUCHKO; ROBOT: JOAN CROS—NURPHOTO VIA GETTY IMAGES



ARTIFICIAL INTELLIGENCE: SPECIAL REPORT

# Unmasking A.I.'s Bias Problem

BY JONATHAN VANIAN

Business is betting billions on A.I., only to find that its algorithms and systems can amplify human prejudice. Can Silicon Valley keep bigotry at bay?

30

# Can This Startup Break Big Tech's Hold on A.I.?

By VAUHINI VARA

Montreal's Element Al has the pedigree to push the boundaries of what is possible with artificial intelligence.

40

# Ma vs. Ma

By ADAM LASHINSKY

Jack Ma of Alibaba and Pony Ma of Tencent built the empires that dominate China's digital economy. Is the world big enough for both of them?

PAGE NO



DEPARTMENTS

# FOREWORD

# 6 ➤ Springtime for A.I.

Machine-learning algorithms are making ever bigger breakquestions about their very human limitations. By CLIFTON LEAF

# BRIEFING

# 7 ► America: Who'll Keep on Truckin'?

Autonomous trucks may revolutionize the industry one day, but the U.S. could be facing an acute driver shortage well before then.

BY KIRSTEN KOROSEC

# 10 ► Red Staters See Green in Hemp

could be making a big comeback. By JEFF JOHN ROBERTS

# 11 ➤ Forced Arbitration Enables

to women in the workplace. Here's how we're fighting back. By GRETCHEN CARLSON

# 12 ➤ Online Success Doesn't Come Cheap Target is holding its own against

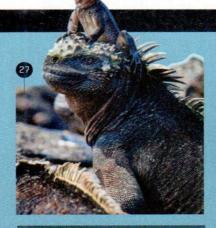
Amazon-but at too great a price,

# 13 ► How NAFTA Can Save FIFA

The U.S., Canada, and Mexico promise FIFA their World Cup 2026 profit. By ARIC JENKINS

# 14 > The 10 Best Workplaces for Millennials

satisfaction at firms with strong values. By CHRISTINA AUSTIN



# FOCUS

### TECH

# 15 ➤ This Game Is Out of Control

By LISA MARIE SEGARRA

# 17 ► "Black Mirror," Slightly Broken

through protectionism, state subsidies, and monopolies. That doesn't mean the country will succeed. By CLAY CHANDLER

18 ➤ To Catch a Bitcoin Thief, Call These Detectives Cryptoforensic firms are helping law enforcement track criminals pliance, By JEFF JOHN ROBERTS

# 19 > Tech for the #MeToo Era

Meet the blood alcohol concentration-tracking Buzz design process that birthed it.

Exos, a firm known for training elite athletes, is using sophis-ticated tech to help desk jockeys stay healthy. By PHIL WAHBA

# VENTURE

# 22 - Where Autistic **Workers Thrive**

Fortune 500 companies. By DINAH ENG

## INVEST

24 ➤ Where to Hide From the Headlines
Losing Sleep over a looming trade war or other global conflicts?
These stocks offer safety. By RYAN DEROUSSEAU

# 26 - Making Tech's Future **More Female**

Melinda Gates is backing tech projects whose leaders break the white-dudes-in-hoodies stereotype. Interview by POLINA MARINOVA

# PASSIONS

BACK PAGE

# LAST BYTE

60 ➤ Much to Lose for U.S. Farmers If a trade war breaks out, American agriculture is likely to pay a hefty price. Text by BRIAN O'KEEFE; graphic by NICOLAS RAPP











Fortune Asia [ISSN 0738-5587] is published monthly by Time Asia [Hong Kong] Limited, a subsidiary of Time Inc. is a wholly owned subsidiary of Meredith Corporation. Fortune Asia may also publish occasional extra issues. Customer Service and Subscriptions: For 24/7 service, please use our website: fortune.com/customerserviceasia. You may also contact Customer Services Center at 852-3128-5688, or email to enquiries@timeasia.com or write to Time Asia (Hong Kong) Limited, 37/F Oxford House, Taikoo Place, 979 King's Road, Quarry Bay, Hong Kong. Subscribers: If the postal authorities alert us that your magazine is undeliverable, we have no further obligation unless we receive a corrected address within two years. Mailing List: We make a portion of our mailing list available to reputable firms. If you would prefer that we not include your name, please contact Customer Services Center. Member, Audit Bureau of Circulations. © 2018 Time Asia (Hong Kong) Limited. All rights reserved. Fortune is protected through trademark registration in the U.S. and in the countries where Fortune magazine circulates. Fortune Asia is printed in Singapore. Singapore MCI (P) 061/11/2016. Malaysia KKDN permit no. PPS1162/05/2013 (022950).

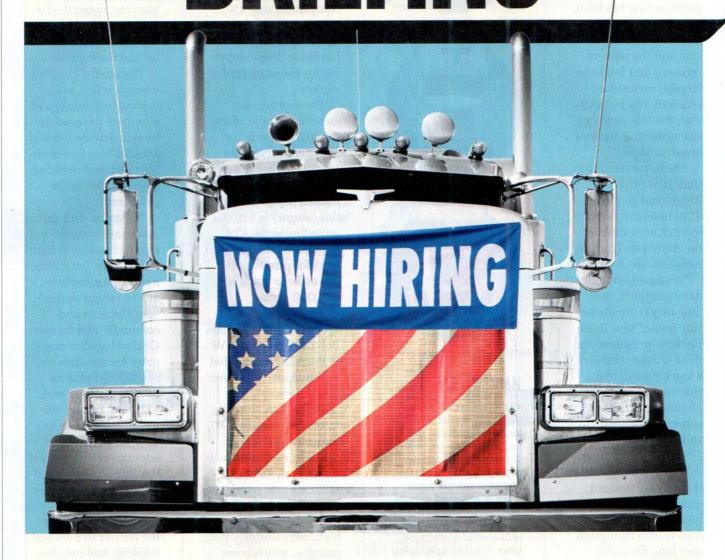


O TRUCK: DWAKI/KULLA—CORBIS/GETTY IMAGES; SIGN: PATRICK STRATTNER—GETTY IMAGES

THE WORLDIN

> 8 PAGES

1



# America: Who'll Keep on Truckin'?

Autonomous trucks may revolutionize the industry one day, but the U.S. could be facing an acute driver shortage well before then.

By Kirsten Korosec

THE TRUCKING INDUSTRY. the backbone of the U.S.

economy, is carrying more weight than ever despite a critical shortage of drivers. And now

this compression point is sending waves of pain through the supply chain from distributors and wholesalers to retailers and consumers in the form of fast-rising shipping costs. Even Amazon and its Prime members are feeling the pinch.

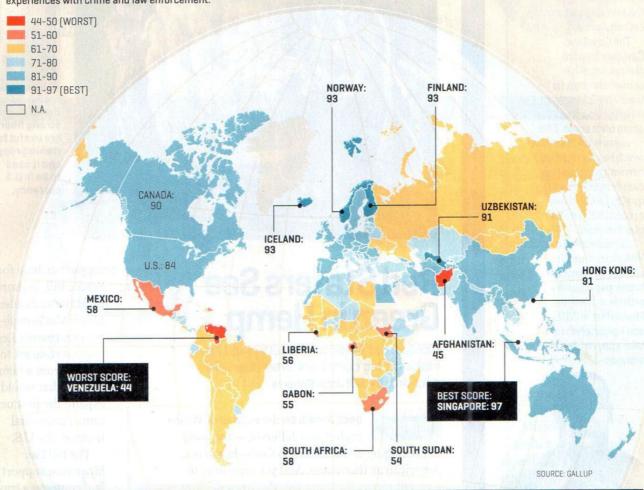
This predicament was a long time coming. An aging driver population that continues to

# ANALYTICS Seeing Trends in the Data

# GALLUP 2018 GLOBAL LAW AND ORDER INDEX

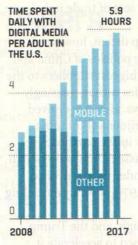
Based on people's sense of personal security and their experiences with crime and law enforcement.

SINGAPORE MAY HAVE BEEN the perfect place for a summit to ease rising nuclear tensions. Based on a Gallup poll measuring how safe citizens feel and how confident they are in law enforcement, the city-state is the most secure nation among 142 countries surveyed. Venezuela finished dead last with just 24% of its citizens having faith in the police. The U.S. scored worse than 31 other countries, including Slovenia and India. (To read how global security affects your portfolio, see "Where to Hide From the Headlines" in this issue.]



# **NEVER UNPLUGGED**

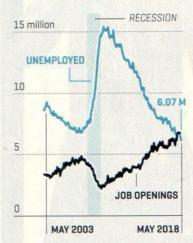
It's hard to imagine that anyone once predicted the death of the Internet. The changing nature of work and increasingly capable smartphones mean consumers today spend an ever-growing share of their waking hours online: about 5.9 hours in 2017, up 4% from a year earlier. Meanwhile, prices for goods sold online have fallen 3% in the past two years, compared with 1% off-line.



SOURCES: KLEINER PERKINS; EMARKETER

# MORE JOB OPENINGS THAN UNEMPLOYED

Time to gussy up the old résumé. For the first time on record, U.S. job openings exceeded the number of unemployed in April, with 6.7 million postings against 6.3 million seeking work. And that trend may continue with the number of unemployed falling under 6.1 million in May. While wages for job stayers rose a muted 2.9% in April, job switchers gained 4%.



SOURCE: BLS, DATA SEASONALLY ADJUSTED, NONFARM JOB OPENINGS



# ECUADOR'S ENCHANTED

When it comes to far-flung escapes, few rival the Galápagos Islands. By Alexandra Kirkman

## ARRIVING ON FERNANDINA ISLAND,

the youngest (at less than 1 million years old) and westernmost in the Galápagos, is like discovering a land that time forgot. Once you disembark from your inflatable panga at Punta Espinosa, its sole landing site, and make your way through the dense mangrove forest that fringes the coastline, you're greeted by a colony of hundreds of charcoal-colored marine iguanas lounging atop one another and sneezing out salt water in a spirited chorus.

La Cumbre volcano, one of the world's most active with six eruptions in the past 50 years, dominates the landscape, its rippled lava fields extending in every direction. In its shadow, sea lions splash in the shallows, their distinctive barks intermingled with the crashing waves, as scarlet Sally Lightfoot crabs scuttle along the ebony shoreline and Galápagos hawks survey the scene from above. No foreign species has ever invaded Fernandina-human visitors aside-making it one of the world's most pristine ecosystems.

When it comes to far-flung escapes, few rival the Galápagos. Located in the Pacific Ocean some 600 miles off the coast of mainland Ecuador, the archipelago of 20 volcanic islands (and dozens more islets) remains an unspoiled utopia despite hosting more than 200,000 annual visitors. Home to a slew of species found nowhere else on earth—the giant Galápagos tortoise, the Galápagos finch (13 unique species in total), and the Galápagos penguin (the world's ▷▷



# MAVS. MA



JACK MA OF ALIBABA AND PONY MA OF TENCENT BUILT TECH EMPIRES THAT DOMINATE CHINA'S DIGITAL ECONOMY. IS THE WORLD BIG ENOUGH FOR BOTH OF THEM? BY ADAM LASHINSKY