Latest trend in AI development

2018

Danny Goh

Less Data Trends

"Less Training Data" era is beginning => Unlocking many AI with non-big-data

Big trends on Data Synthetics (by GAN, etc)

Some Robust Machine Learning Techniques (Capsule Networks)

"**Less Data**" training is beginning

Many <u>niche AIs</u> will be unlocked

Startups' technical strategy

Go domain-specific, relying on small infrastructure, focusing on less data
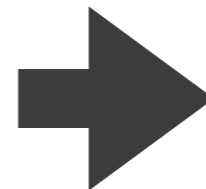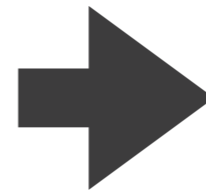
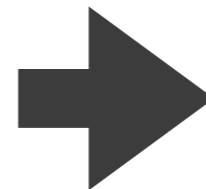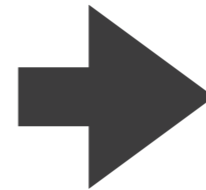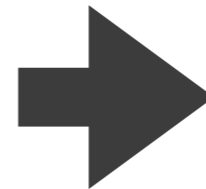| Google approach		Suggested approach
General	→	Domain Specific
Centralised cloud	→	Distributed (on-premises)
Big infra	→	Lightweight / PC-level
All-in-one AI engine	→	Module plug-and-play
Big Data	→	Less Data*

AI business categorisation

Four categories (1) Internet (2) Business (3) Recognition and (4) Autonomous AIs

AI Business		
	Internet AI	Apply AIs to serve users the web services / mobile services with better UX or better conversions
	Business AI	Apply AI to help businesses make decisions, understand customers, marketing, or reduce costs and workloads with AI automation
	Recognition AI	AI for voice / image / video recognition to extract information and convert into usable data for other systems.
	Autonomous AI	AI to automatically move; Autonomous car, Robotics, Manufacturing automation
	CyberSecurity	CyberSecurity innovations are accelerated by AI as well
	Medical Research	Medical / Pharmacy Researches are unlocked by the application of machine learning techniques.
	Developer Platform	Enable developers to build ML applications easily / maintain applications easily

Top Four categories are defined by Kai-Fu Lee (AI in China: Cutting Through the Hype)

Internet AI

Apply AIs to serve users the web services / mobile services with better UX or better conversions

Area of Startup Opportunities

Personal Loan: Big-data-driven Credit Scoring to micro -lending

Telehealth: Allow patients to communicate with doctors with chatbot experiences

Adaptive Learning: For students / learners to learn effectively through AI-based personalisation technologies

Robot Advisor: Financial Planning advisor done by AI. Applied to insurance plan advisors, too

News App: News curator application personalised by AI

Business AI

Apply AI to help businesses make decisions, understand customers, marketing, or reduce costs and workloads with AI automation

Five Areas that attract investors

Customer Support	Business Process	Professional Works	Sales Process	Big Data Analysis
Call Centre/ Emails / Chat-based Customer support	Document, Knowledge Discovery, etc.	Legal Accounting Compliance Patent Attorney Medical Doctor	Identify the focus customer, Call Logs, CRM	Abuse Detection Fraud Detection Customer Identification

Recognition AI

AI for voice / image / video recognition to extract information and convert into usable data for other systems.

Smart Speaker	Tracking people/Car	Industrial Automation

Smart Speaker
In-car Smart speaker

People tracking in
retail Shops
Car tracking for
Public sector
Biometrics

Sensor networks to
identify robot breakdown
Camera for
Product quality inspection

Autonomous AI

Autonomous Car + Robotics

Autonomous Car

Lots of partial Technologies have invented and merged
- Tire sensor,
- Driver Emotion Detection
- Road Quality

Industrial Automation

Automation of
blue-collar works
By robots

Inventory Management

A robot to manage
Inventories

AI Business by industries

Diversity of industries are now adapting

HEALTHCARE
CROSS INDUSTRY
APPLICATIONS
CYBERSECURITY
COMMERCE
ADVERTISEMENT / MARKETING
FINTECH
ENTERPRISE SOFTWRES
IoT/IIoT
SALES, CRM
AUTOMOTIVE
HR
PERSONAL ASSISTANT NEWS MEDIA / ENTERTAINMENT
EDUCATION
AGRICULTURE
TRAVEL HARDWARE CHIPS, IOT
LEGAL
REGTECH(Regulatory)
SOCIAL PHYSICAL
SECURITY DEVOPS / CLOUD REAL ESTATATE SPORTS

*CBINSIGHTS

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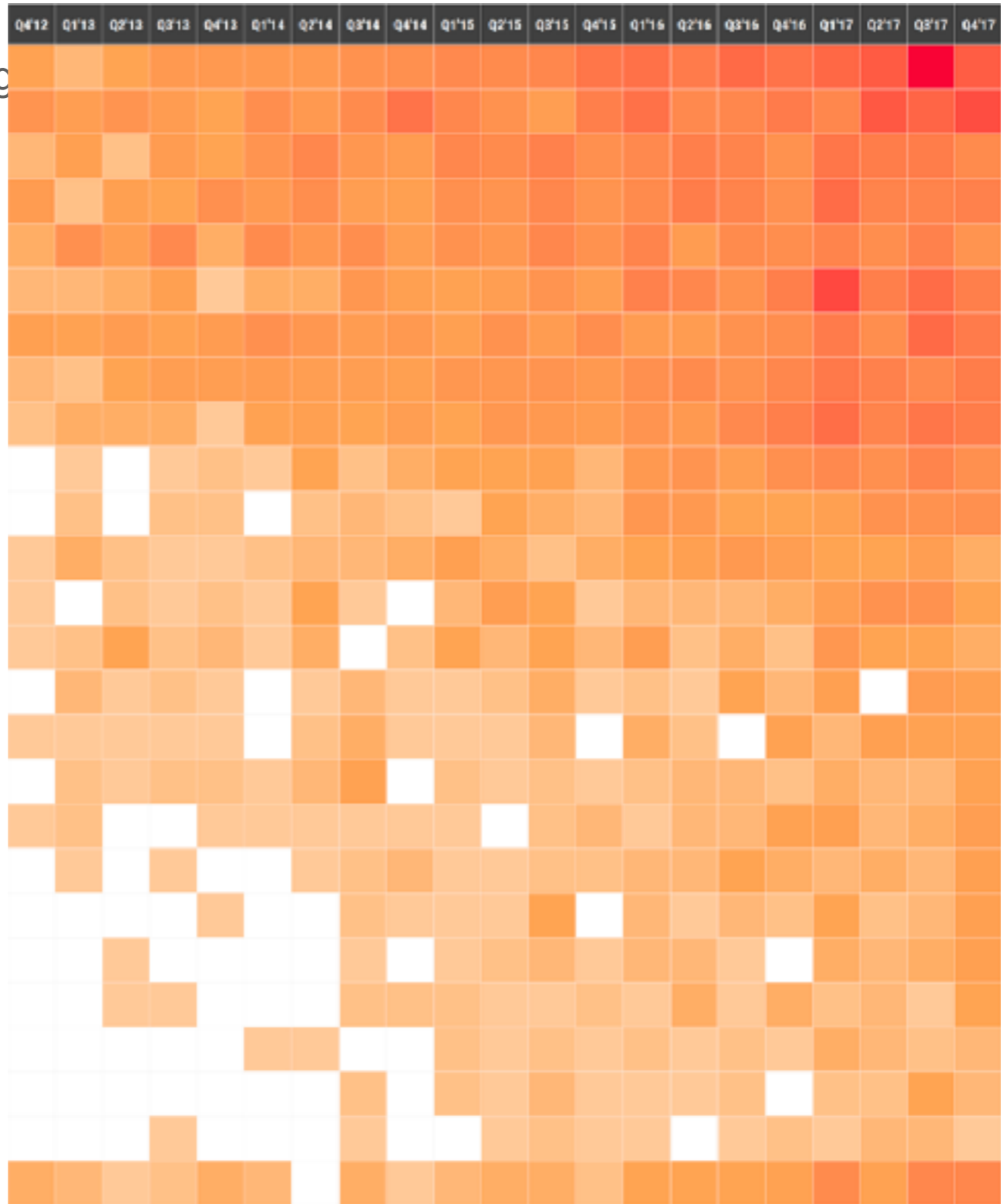
Well-Funded Startupsin the four areas

Data and Value are rapidly adapting to AI

Internet AI	**ByteDance** News App **$1800M**	**Mobvoi** Smartwatch In China **$257M**	wealthfront Financial Advisory App **$204.5M**
Business AI	**DataMiner** Total Data Mining Solution **Dataminr** **$577M**	INSIDE SALES.COM **Inside Sales.com** Sales Acceleration **$290M**	coveo Intelligent Enterprise Knowledge Search **$170.7M**
Recognition AI	商汤 sensetime	Face++ **Face++** Facial Recognition **$608M**	C3 IoT **C3 IoT** PaaS for IoT Apps **$103.4M**
Autonomous AI	**SenseTime** Facial recognition and Self Driving Car **$637M**	ZOOX **Zoox** Autonomous Car **$290M**	UPTAKE Equipment controls **$258M**

Other Areas

Cyber Security / Medical / Pharmacy

CyberSecurity	CYLANCE **$297M**	DARKTRACE **$182.3M**	SHAPE SECURITY **$106M**	CROWDSTRIKE **$481M**
Medical / Pharmacy Research	flatiron **$313M**	iCarbonX 碳云智能 **$196M**	**$85M**	BenevolentAI **$202M**
Developer Platform And AI DevOps	H₂O.ai **$73.6M**	Moogsoft **$52.93M**	logz.io **$46.9M**	diffblue AI for Code **$22.7M**