

# 趨勢科技的"AI 經驗"跟"T-Brain"的介紹

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# 自我介紹

- Terrence Chou (周存賚)
  - 趨勢科技資深研發副總
  - 25年軟體開發經驗
  - 2016 與 國網中心 共同開發 T-Brain (人工智慧加速計畫)  
<https://tbrain.nchc.org.tw/>

# 趨勢科技 Trend Micro Inc.

- 全球網路資安解決方案領導廠商
- 市值: 2,148億台幣
- 2016 營業額: 350億台幣
- 連續72季獲利

# 趨勢科技的"AI 經驗"

- Trend Micro is an AI company
  - 20+ AI related projects ongoing now
- Share 3 cases:
  - Anti-Spam
  - Malicious Macro Detection
  - PE Malware Detection

# Anti-Spam

- Too many spam mails every day
- There is no way to use human to write anti-spam rules
- Use Machine Learning as the final solution

# Malicious Macro Detection

- Trend has a technology called “Cloud Sandbox”; it simulates Word/Excel file open behavior to detect malicious document.
- “Cloud Sandbox” is slow and expensive.
- Take “Cloud Sandbox” previous results as dataset to train **Machine Learning** model
- The trained model become the filter.

# PE Malware Detection

- New competitors claim their “AI technology” are “**next generation**” security solution
- De-value existing anti-malware company
- Trend develop own “AI technology” and integrated to existing product immediately.
- De-value “next generation” with free tool.
- Promote “**XGen**” (Cross-Generation)

# Conclusion – AI is not everything

- Technology is only part of solution
  - Prediction rate is not everything
- UI/Productize/Support/Customization/Globalization/... are things we need to consider
- Continually improvement



# Conclusion – Why AI?

- Workload
  - Can we use AI to offload tasks and speed up customer service?
- Expensive unit
  - Can existing result be the taring dataset of Machine Learning?
- Competition
  - Beat competitors with AI

# Conclusion – What if we don't do AI?

- 3 years from now:

“So many AI projects failed”, “So many AI startups disappeared” ... “Luckily we didn't do AI projects.”

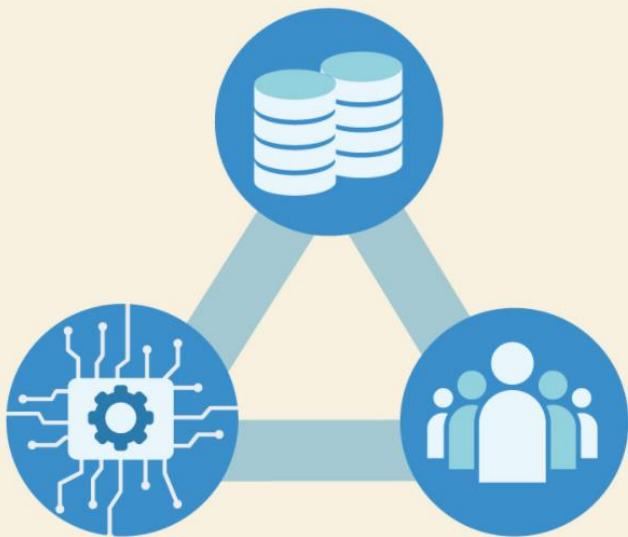
Or

“Why our business is shrinking so quick?”, “Why this new company is killing us?” ... “We should start AI projects earlier.”

# Conclusion – How to do AI?

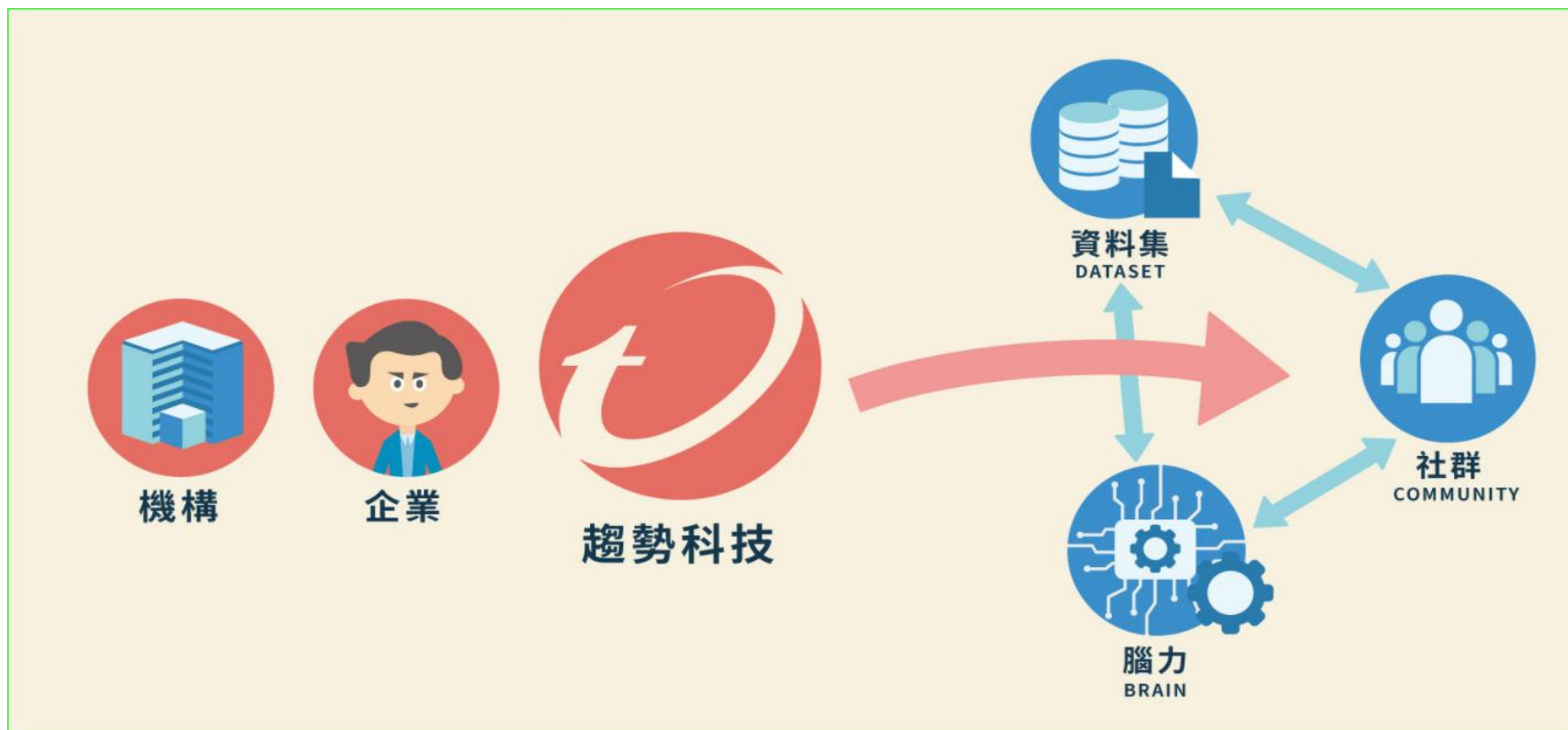
- Reference Trend Micro 3 cases.
- T-Brain

# What is T-Brain



- ✓ 提供大量且容易取得的數據
- ✓ 便利的開發環境：提供各種工具模型，成為ML串流平台
- ✓ 產、官、學攜手合作建立ML正向生態圈

# What is T-Brain



# T-Brain Activities

- T-Brain will host contests every 2~3 months starting 2018
- T-Brain will invite business to provide real dataset as the contest dataset.
- T-Brain will invite university to attend the contest
- Trend Micro will provide the **award**

# T-Brain benefits to university

- Student can use real dataset (not textbook dataset) to practice Machine Learning.
- Students can understand real business
- Student can take the contest result as a reference.
- Earn \$\$\$

# T-Brain benefits to company

- Start a AI project quickly.
- Test AI idea without too much investment.
- Chance to recruit talent AI student/team.
- Brand promotion.



# T-Brain benefits to Startup

- Provide dataset for contest
- Attend a contest to demonstrate superior technology.
- Convince customers.
- Company Exposure.

# Conclusion

- T-Brain wants to help Taiwan grow AI experts.
- T-Brain wants to help Company adopt AI.
- T-Brain is an ongoing project; any suggestion is welcomed.
- Trend Micro will continue support T-Brain.

# Thank You!

# Backup Slides

# 類似 T-Brain Machine Learning 比賽網站

- 美國的 Kaggle
  - <https://www.kaggle.com/competitions>
- 阿里雲的 天池
  - <https://tianchi.aliyun.com/competition/index.htm>
- 科技部的 科技大擂台
  - <https://fgc.stpi.narl.org.tw/activity/techai>
- 智庫驅動的 資料挑戰賽
  - <https://dc.dsp.im/main/activity>

# 李開復：最看好金融領域AI

- 創新工場近年聚焦投資人工智慧(AI)領域項目，其創辦人兼CEO李開復表示，AI很有可能取代許多傳統、技術上的工作，創新工場在AI領域中有大量投資是合理的。其中，**他最看好金融領域的AI**，最成功的投資項目在此。(工商時報 5月25日)

# 台灣人工智慧發展的機會

- 政府的方向:

## 科技部AI創新研究中心小檔案

期程	五年
經費	每年10億元，共50億元
目標	<ul style="list-style-type: none"><li>● 設三至四個AI創新研究中心</li><li>● 鼓勵學界投入AI領域，打造AI生態</li><li>● 儲備AI人才</li></ul>
研究範疇	<ul style="list-style-type: none"><li>● 硬體：晶片、雲端運算系統</li><li>● 演算法技術：演算法、深度學習、大數</li></ul> <p>智慧應用：醫療、交通、金融、製造等 「雲」「網」「端」各面向 所需的核心理技術</p>
補助項目	<ul style="list-style-type: none"><li>● 研發費用</li><li>● 出國合作項目</li><li>● 研究主持費及薪資</li></ul>
薪資鬆綁	可自訂合理報酬延攬海外人才

資料來源：採訪整理

江睿智 / 製表

資料來源：  
經濟日報

# 台灣 AI 應該求精 不求廣

- 在軟體業，大概只有業界前三名才能賺到錢，將來 AI 產業也有可能是這樣。
- 五個 第五名 比不上 一個 第一名。
- 如果政府想投資所有 AI 相關的產業，最後的結果可能沒有一個可以賺大錢。



# 台灣人工智慧發展的機會

## 以智慧金融預測 (AI Financial Prediction) 為例

- 金融預測應用:
  - 投資組合
  - 股價走勢
  - 詐騙防範
  - 信用評等
  - 金融客服
  - 新聞分析

# 台灣人工智慧發展的機會

- YES ! 台灣的“智慧應用”就在:

**Prediction! (預測)**

# 預測之島

# 神預測之島