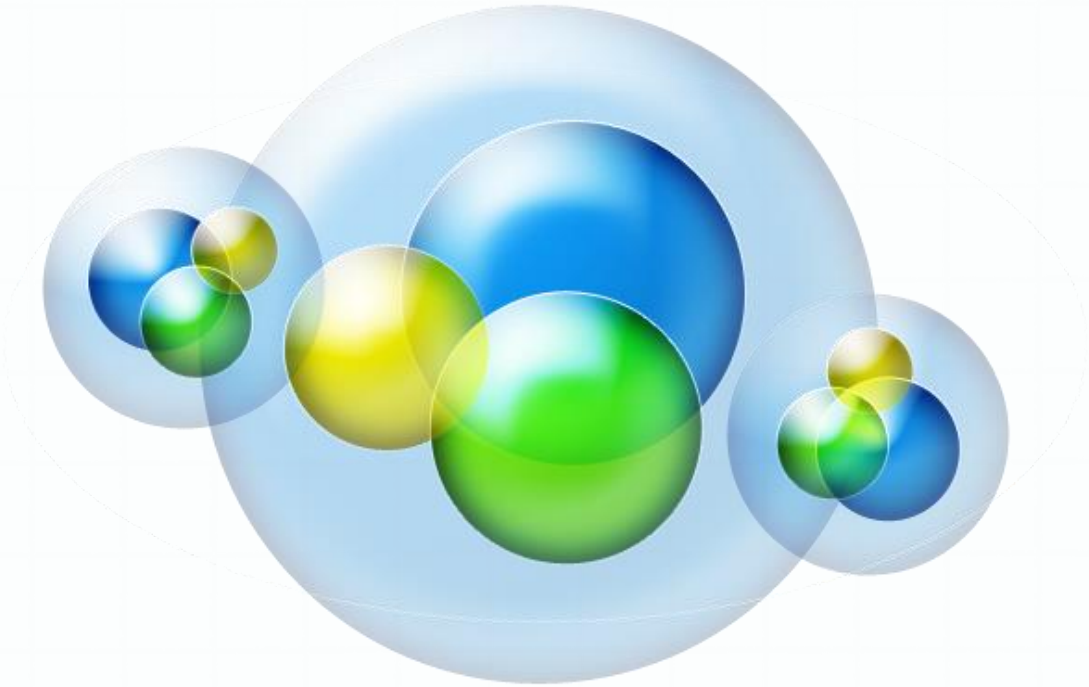


# Google GCP and AI

**Perth .Net Users Group**

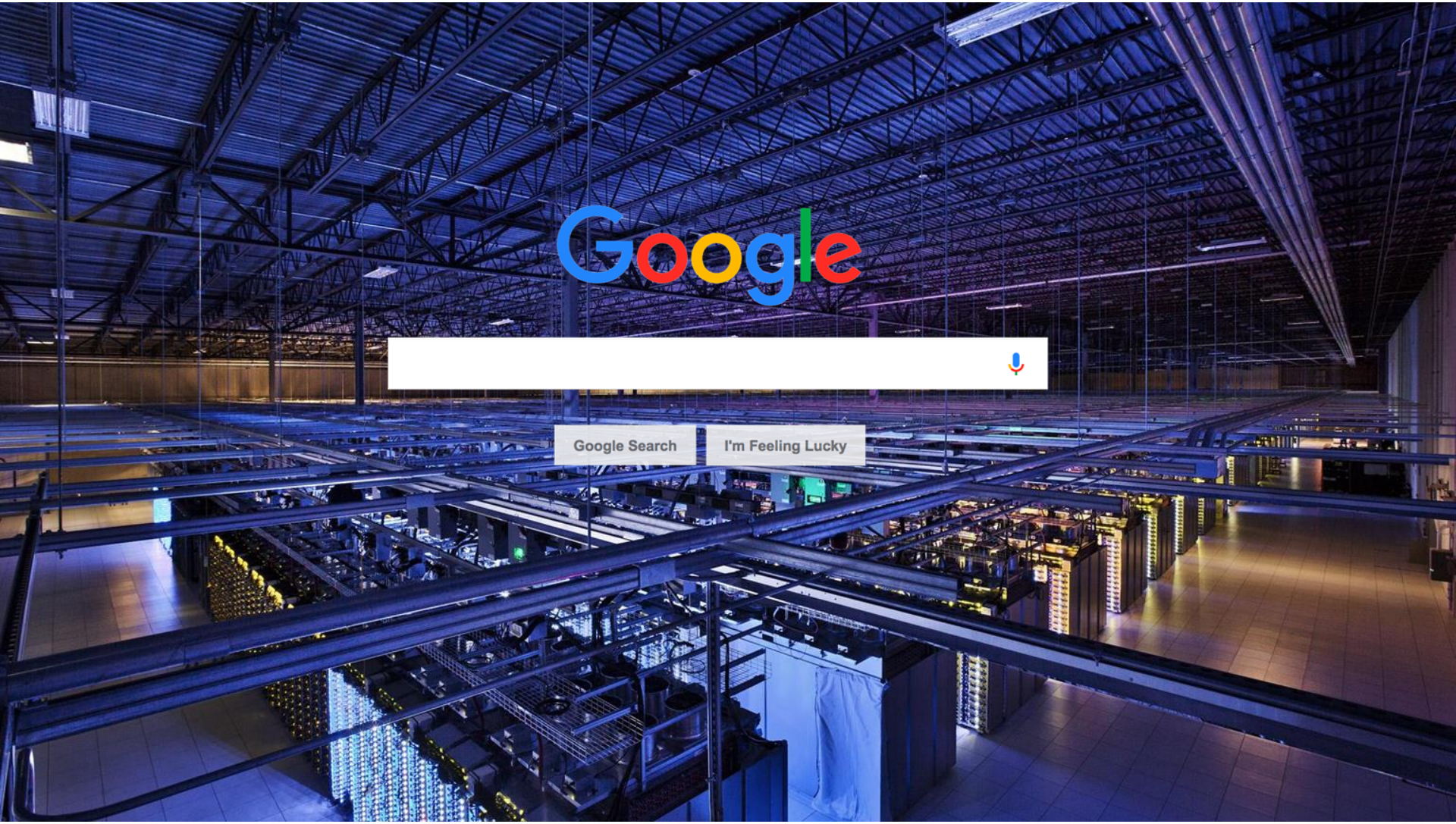
**18th December 2018**

# Agenda

- What is Google Cloud Platform?
- Why focus on AI and some of the basics
- I’m a developer, get me out of here!
- Demo application
- Lessons Learned

Organize the world's information and make it universally accessible and useful

Google Search I'm Feeling Lucky


Google
Google Search
I'm Feeling Lucky

# Seven cloud products

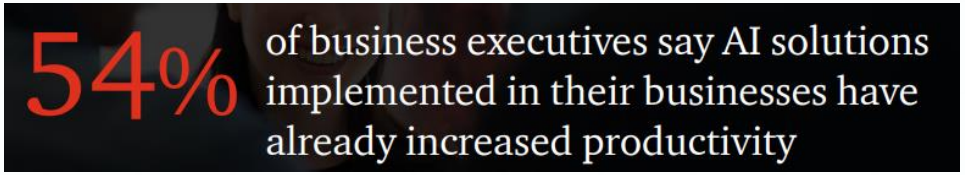
# With one billion users each

Google Cloud

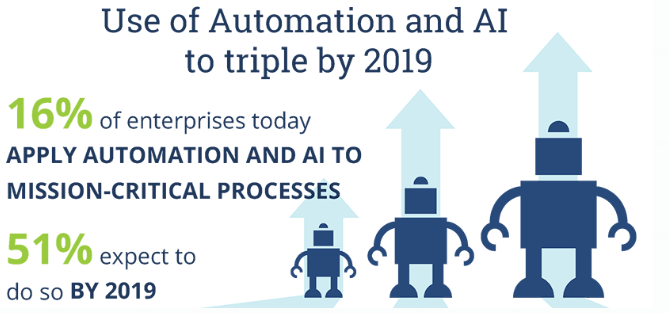
Google Cloud Platform

**Use best of Google's innovation to solve the problems that matter most to you**

# Why focus on AI?




(PwC Consumer Series 2017)




(ISG 2018)

- High adoption expected.
- "No brain, no gain"
  - Two-thirds of companies struggle with finding and acquiring AI talent
  - 83% struggle with retention.
- One solution (Hire.google.com) is using AI to find AI developers.
- To help bridge the gap, cloud suppliers are providing "pre-trained" models.

# The basic AI Concept

- In 1905 George Santayana a philosopher said, “Those who cannot remember the past are condemned to repeat it”
- In 1980 Dr. Carl Sagan a  cosmologist said, “You have to know the past to understand the present.”
- In 2012 Robert T Kiyosaki an accountant said, “The best way to predict the future is to study the past, or prognosticate.”
- AI model training is all about analyzing the past to predict the future.

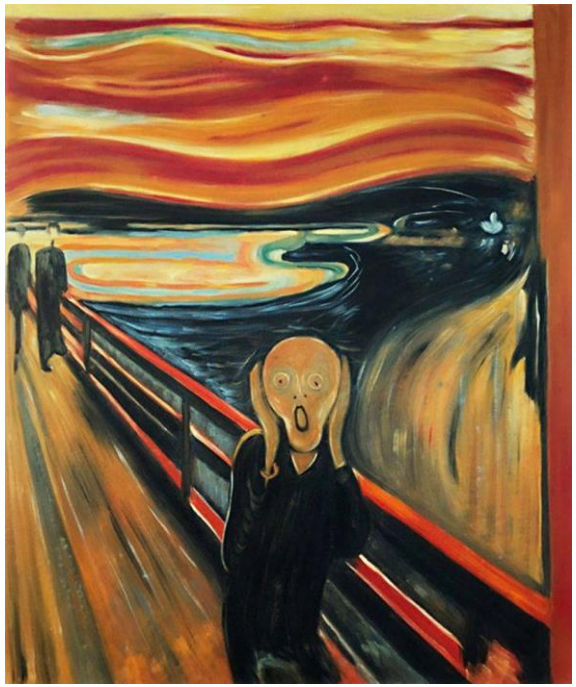
- Neural Nets are not simple.  Tools mainly are designed for data scientist by data scientist.
- For Dev there are a few out of the box APIs
  - Vision API (Label, extract Text, Web search)
  - Video API  (extract metadata)
  - Translation
  - Text-to-Speech
  - Natural Language (extract intent, main use is for Bots)
- As always, it's not long before you get to the last 10% for functionality that takes 90% of the effort.

# Landmark Example

- **Landmarks – Where is this?**

# Label Example

- Label – what description would you give?



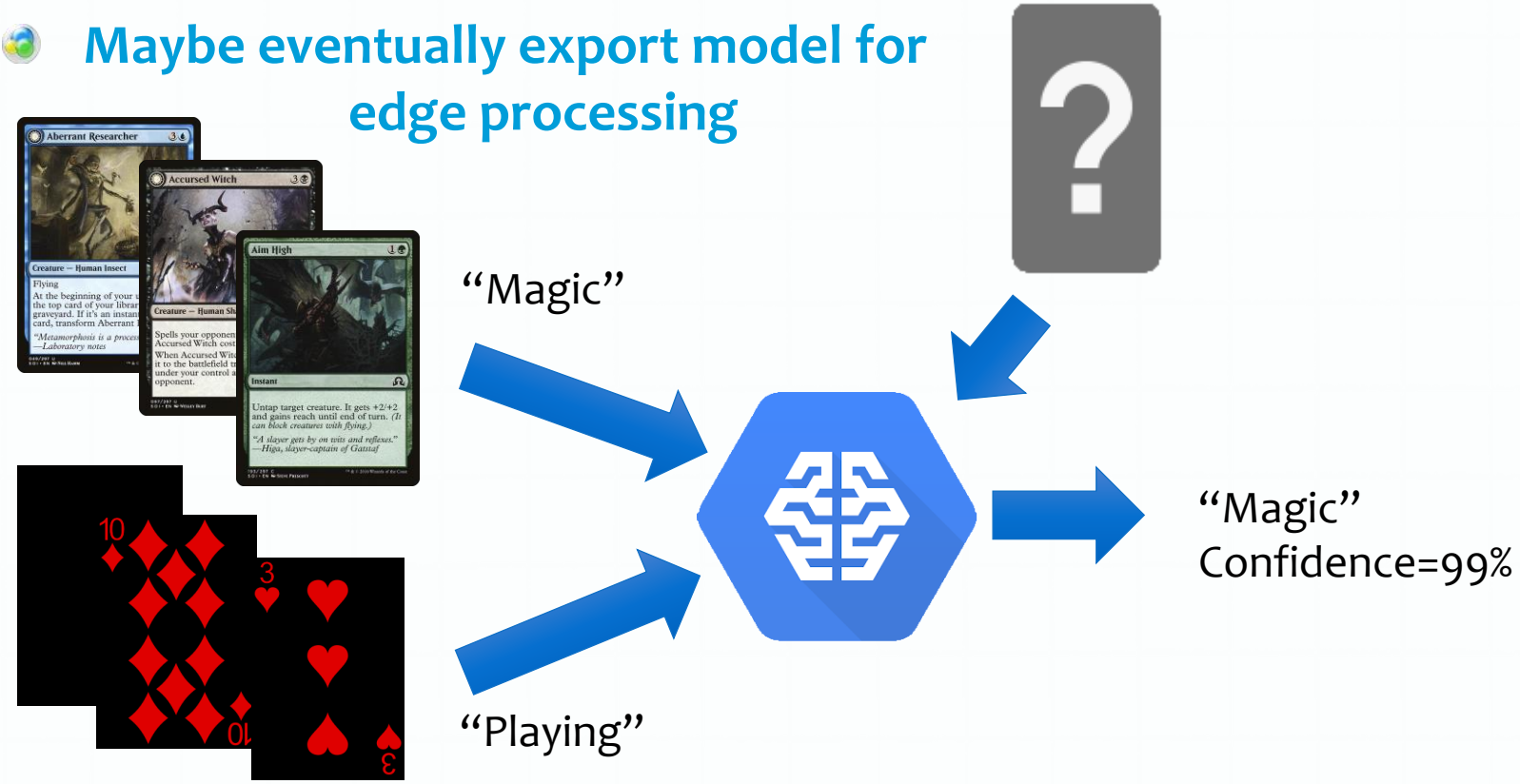
# Text/OCR Examples

- Text

PRODUCT DEMO
NEXT EXIT

# Finally AutoML

- Great option for custom labels
  - Allows training
  - With as few as 100 images
  - Maybe eventually export model for edge processing



# Deploy the App to GCP!

# Questions

- Code and images available on GitHub

  https://github.com/richardagreene/PERTHdotnet-CardVision

- Presentation in GitHub repository