

Data Maturity and Cutting Edge Models

Open-source - why?

What makes a good predictive model?

- Good code
- **Useful data**

Firms share their code, while protecting their data





Facebook
Open Source

Examples

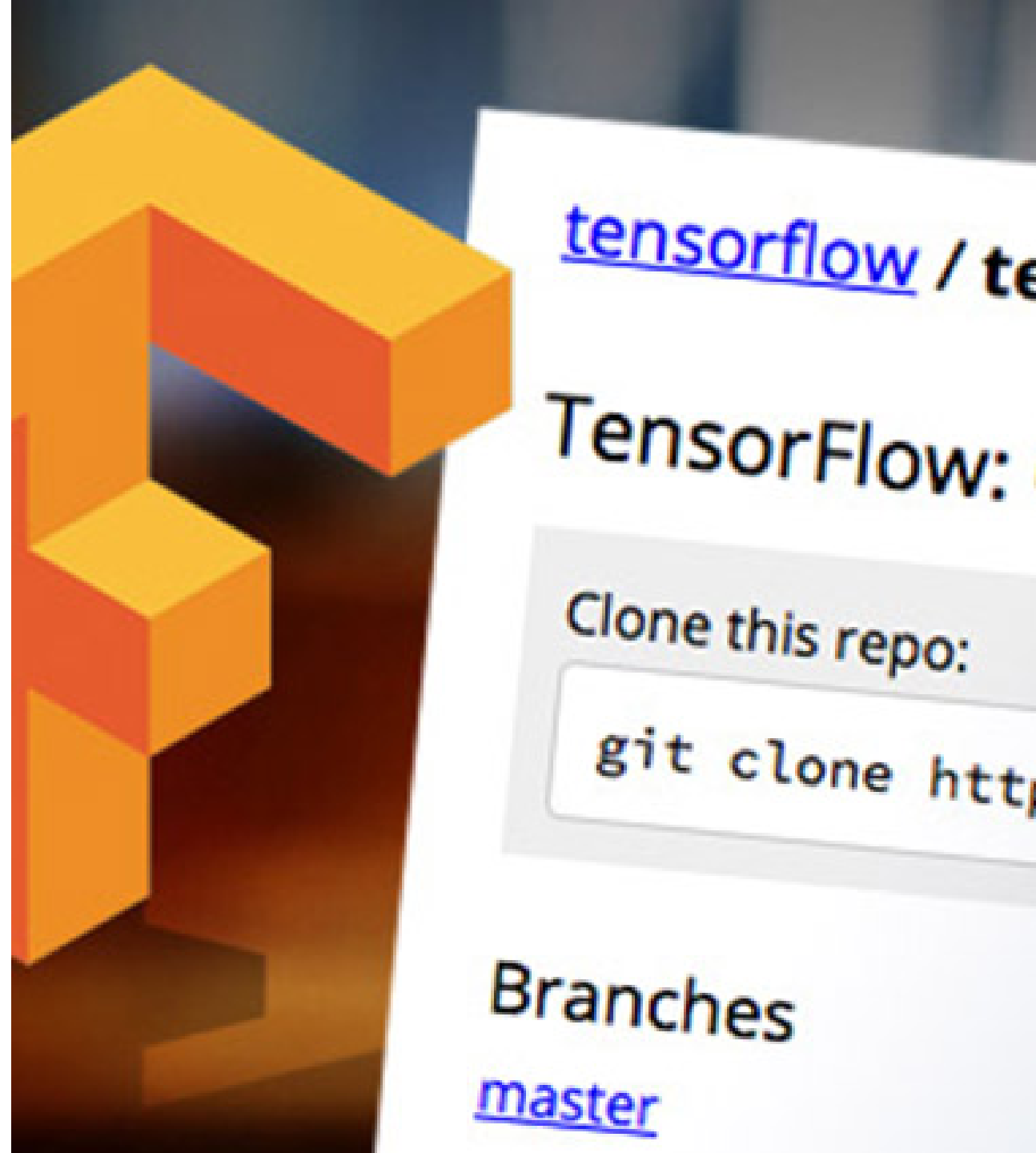
Facebook Open Source Projects

PyTorch

Examples

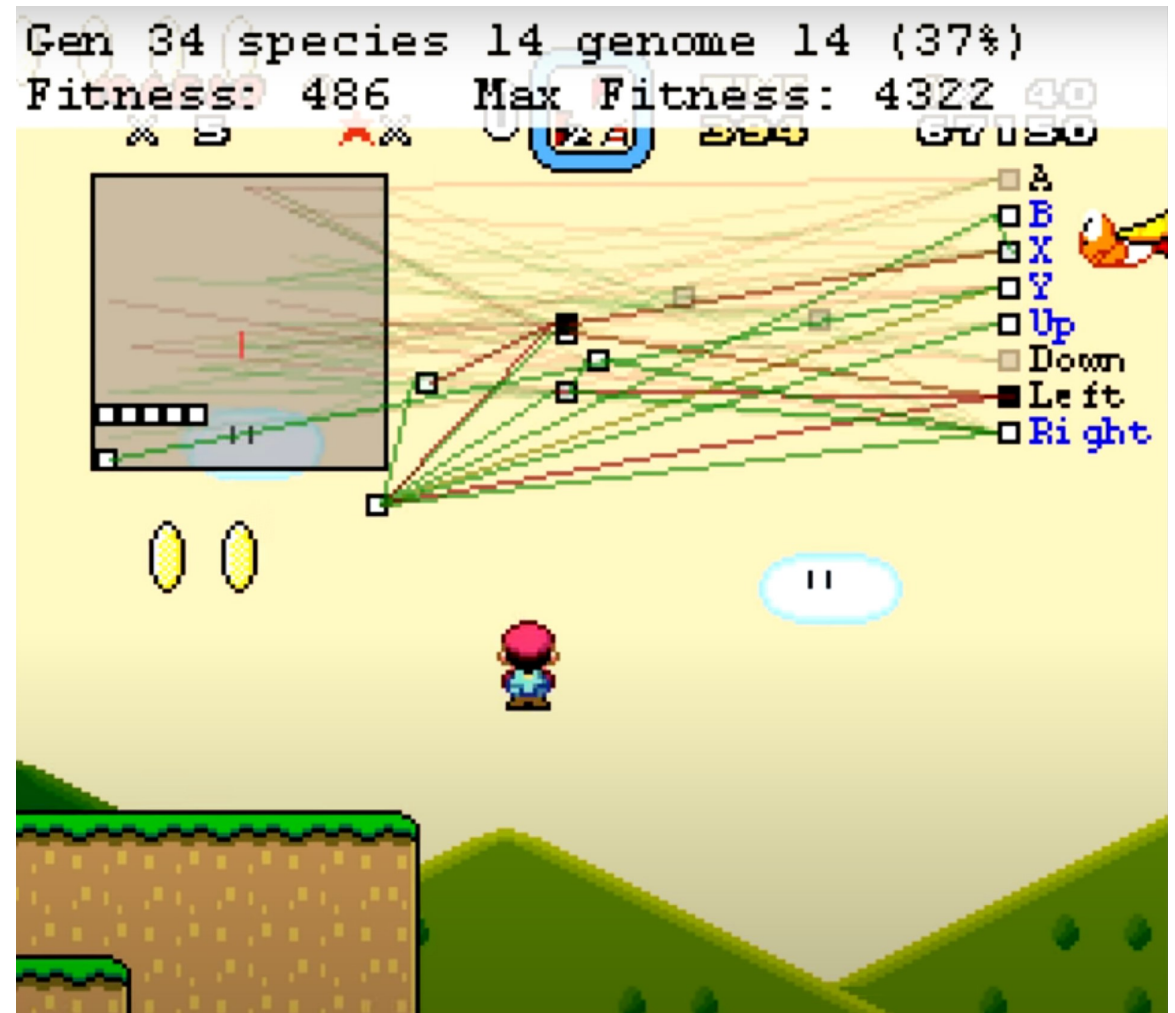
Tensorflow

Android



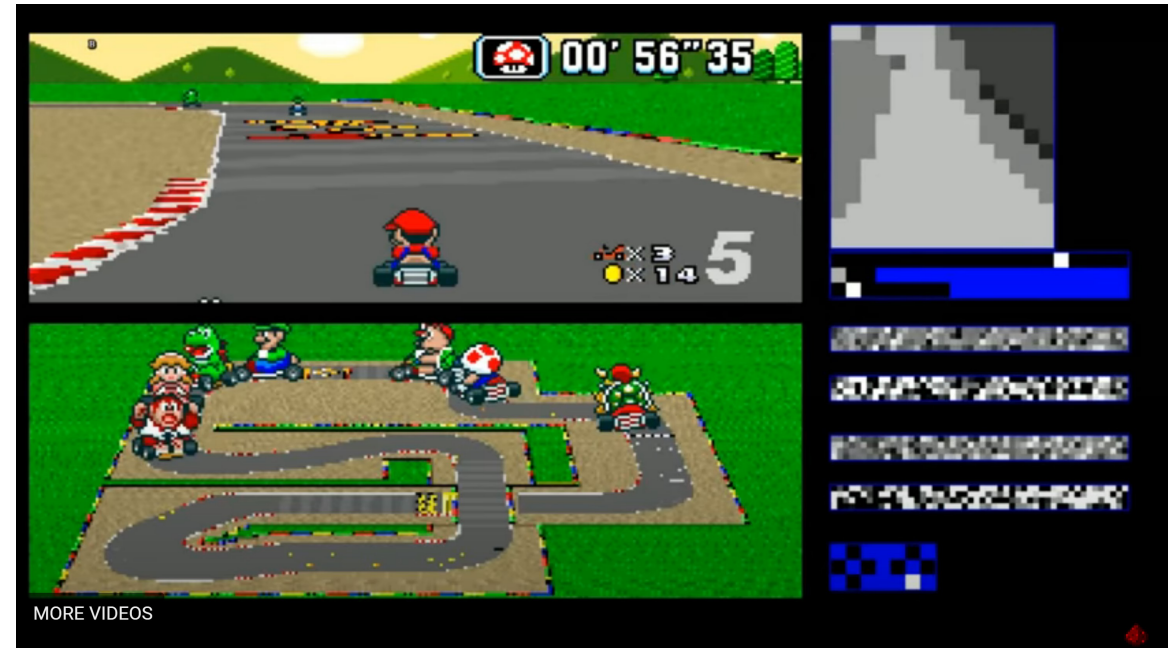
Neural Networks

- Designed to simulate the way that neurons in our brains work
- [Marl/O](#)



Neural Networks

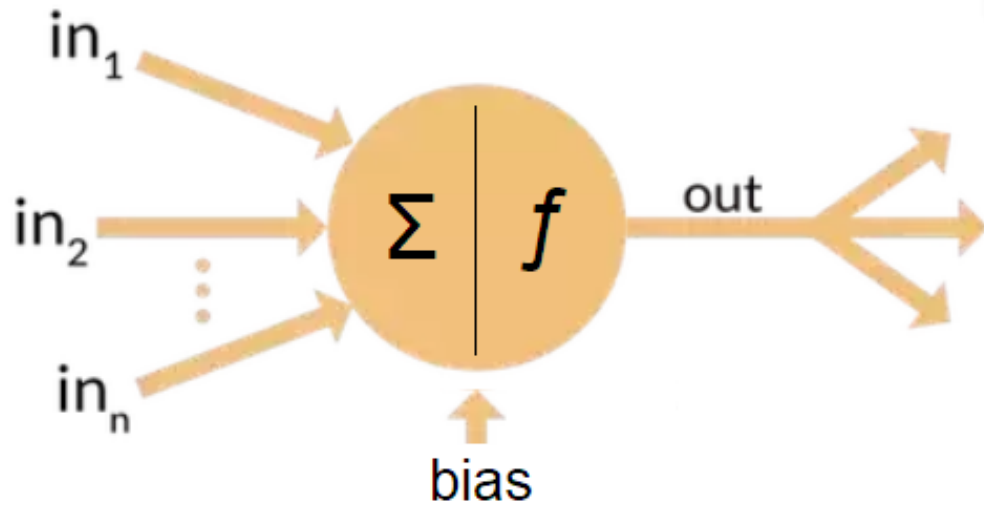
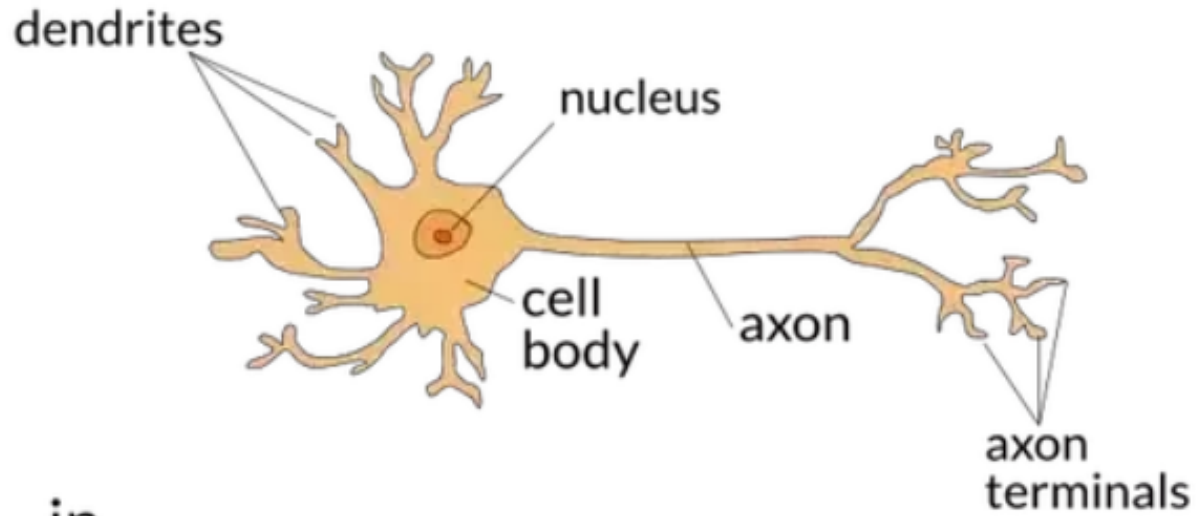
- Allows for very abstract problems to be represented and solved
- [MariFlow](#)





Let's interact with a
neural net

Quick, Draw! Game

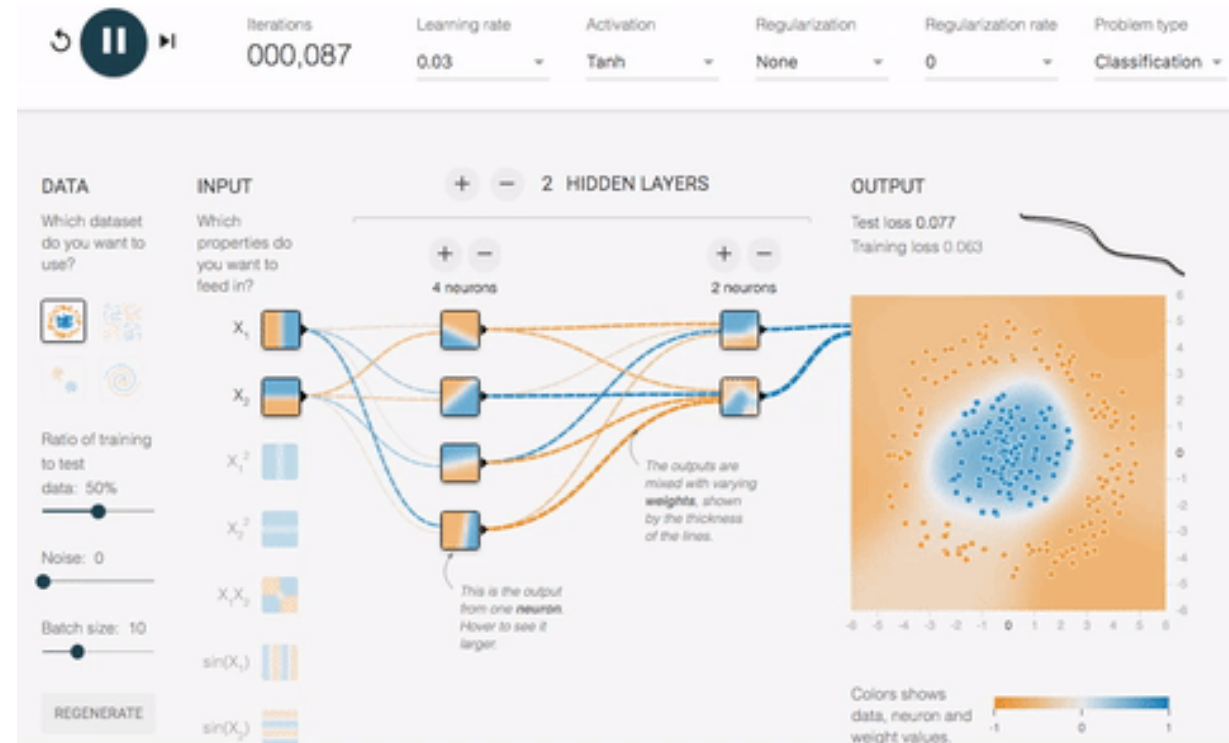


How does it work?

- Inputs are combined into a single value
- If the value is high enough, the neuron "activates" and sends a signal forward

Build one!

- Tensorflow Playground



Data Maturity Model

From MHR



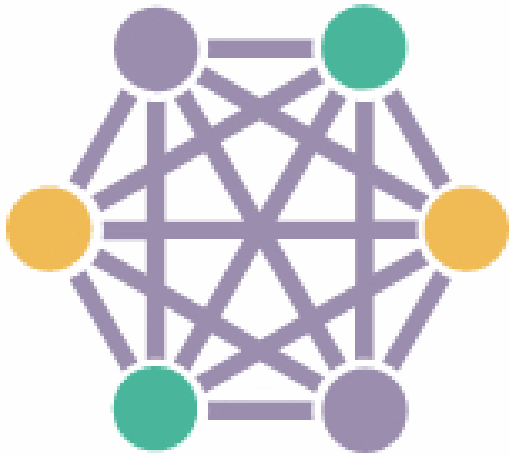
Operational

Analytics are only done where they are REQUIRED, and are not used to coordinate or improve processes

Descriptive

BI is used to report, but not used uniformly or consistently





Planning

Analytics are now used consistently,
and to coordinate planning across
the organization

Predictive

The organization moves beyond using data to plan, and begins using it to inform future decisions by predicting outcomes





Prescriptive

Data are used to FIND problems, in addition to planning and predicting based on known problems

Where is your organization?

For lab

Finish your second project!

Thanks for a fun semester!