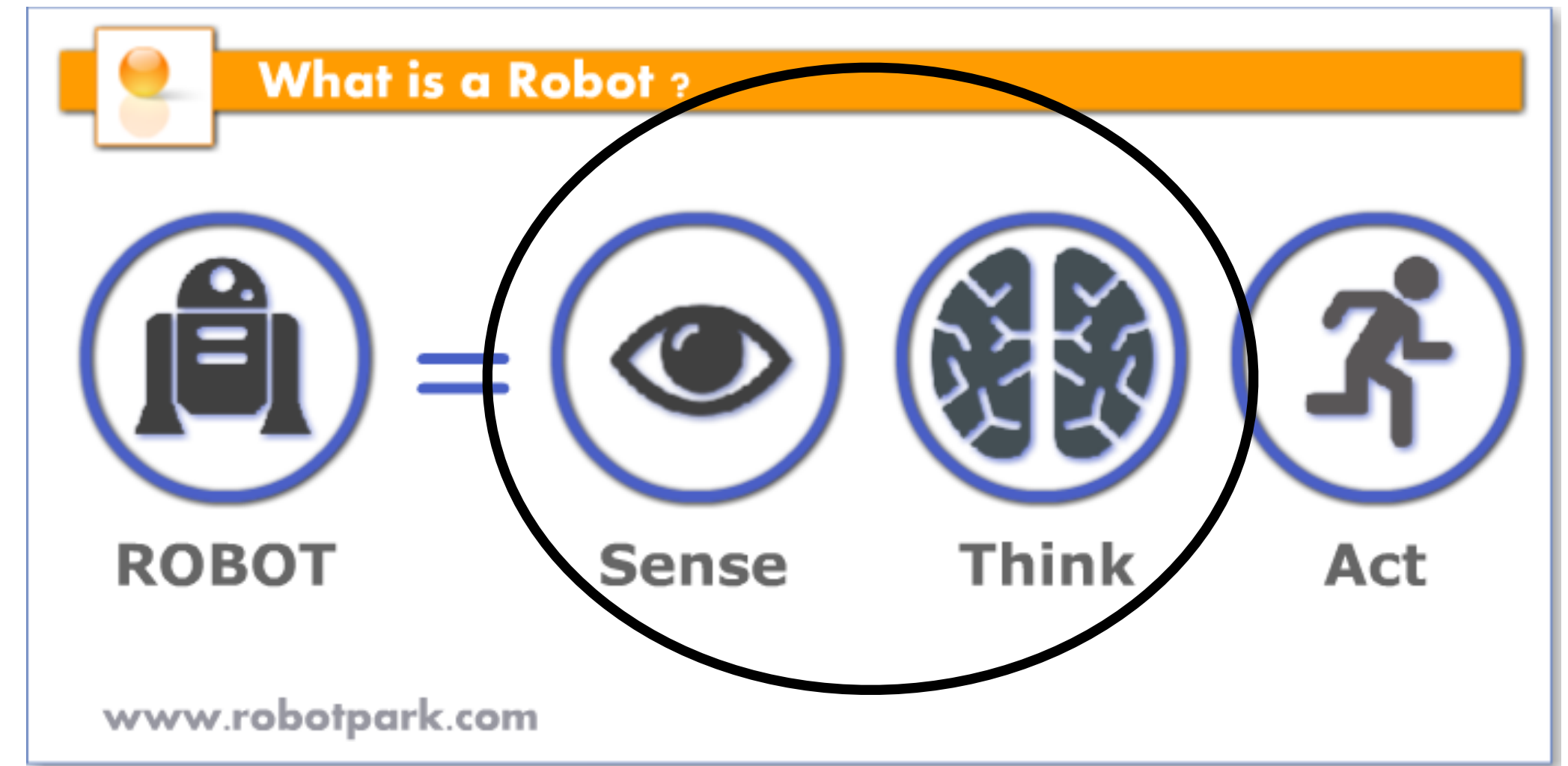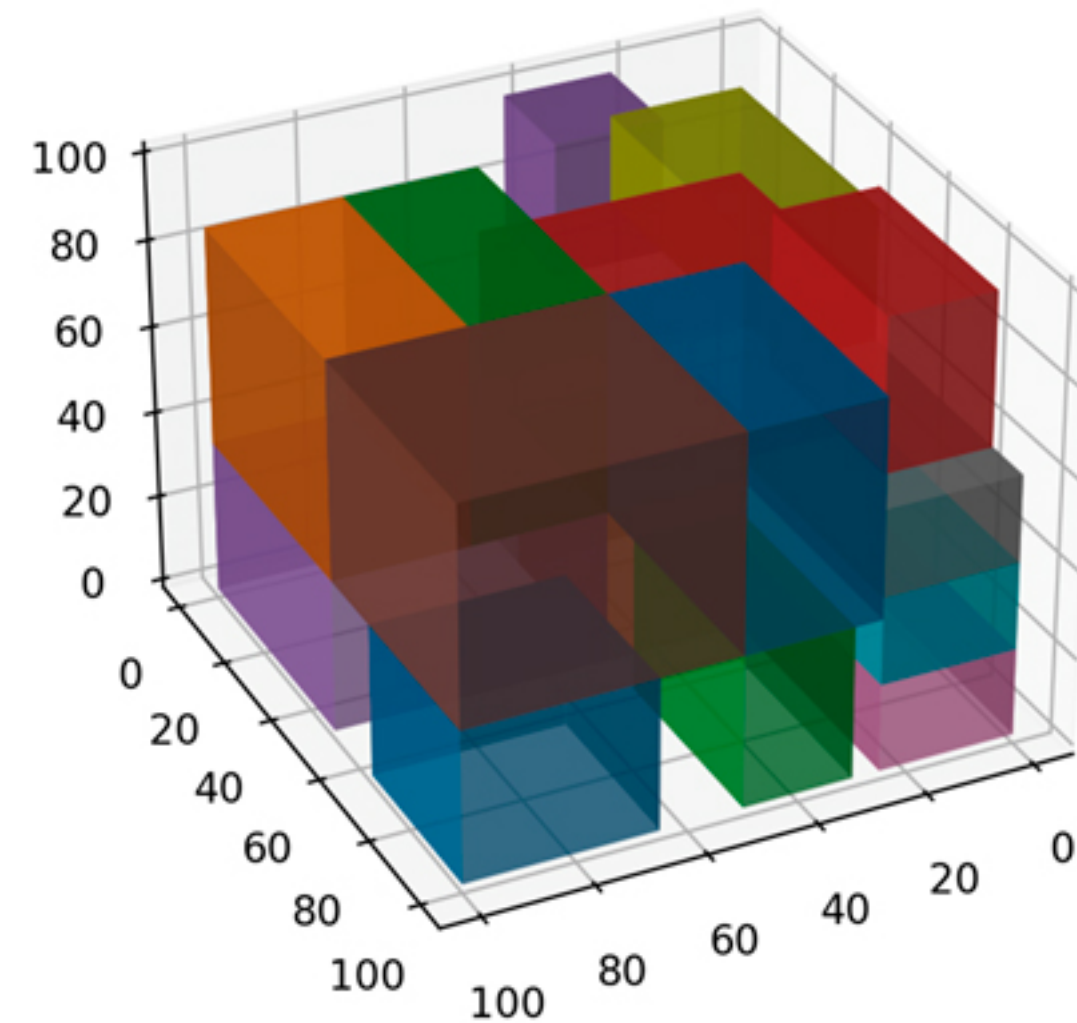# Group 24?

Who?

- Informatics: Robotics and Intelligent Systems (IRIS)

- Want a good understanding of programs and the math/stats behind
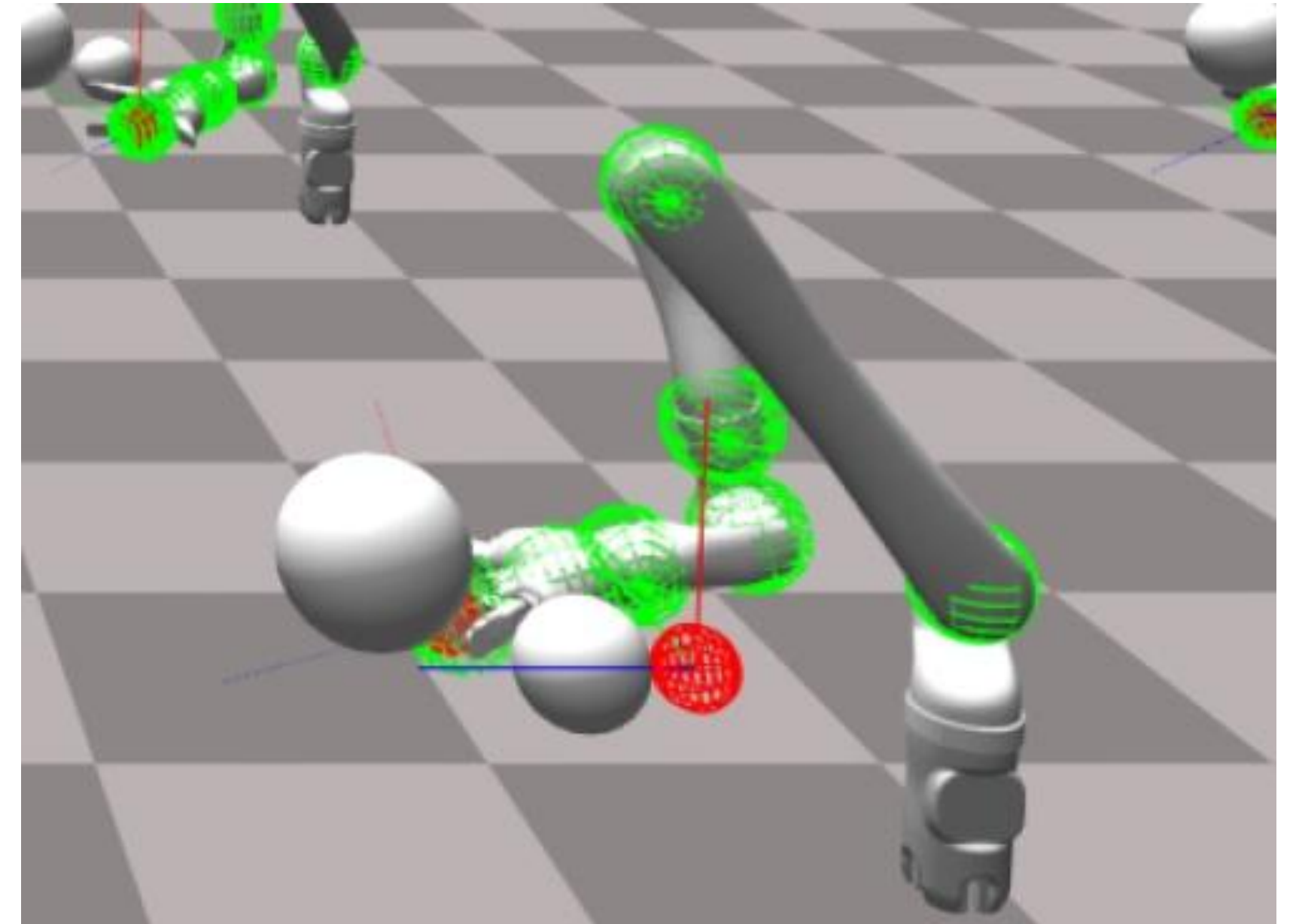

Elias
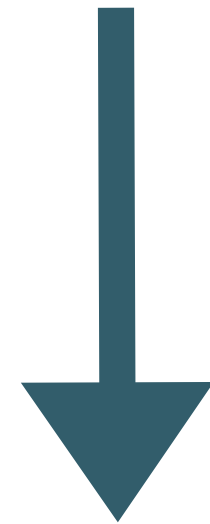

Trym

Mons

What?

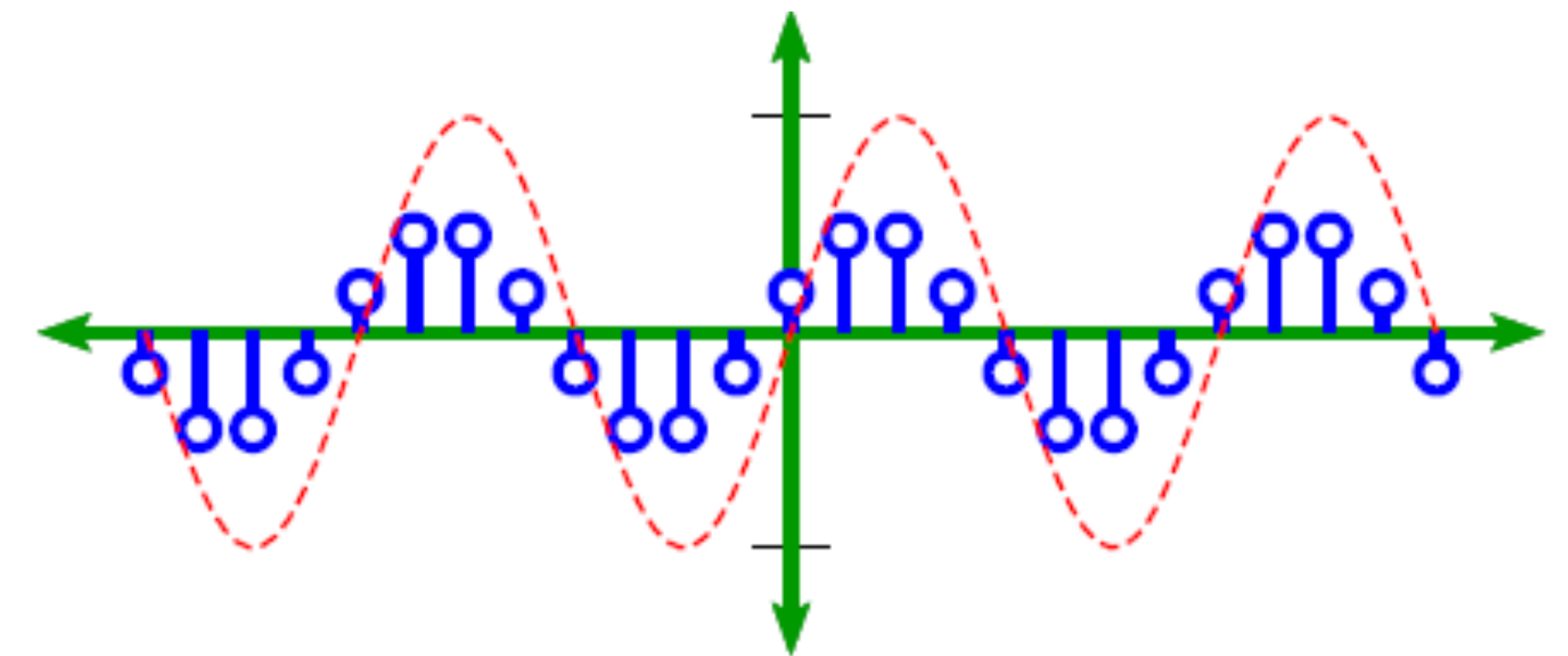Implement RNN from scratch

Gradient problems

Implement LSTM from scratch

Implement Transformer from scratch

Why?

- The world consists of sequence-data

  - RNNs can handle sequence data

  - LSTMs can handle sequence data (even better)

  - Transformers can handle sequence data (even better)

    - SOA in large language models

- Why RNN/LSTM first?

  - Transformers are cool, but understanding the motivation and research behind them is also cool

How?

- Python

  - Only numpy for calculations (no pre-coded ML libraries)

  - Possibly other packages to improve runtime

- Implement …

  - Various gradient-based optimisers

  - Various loss-and-activation functions

  - Possibility to configure hyper-parameters easily