How to Destroy the Human Race?

[aps]

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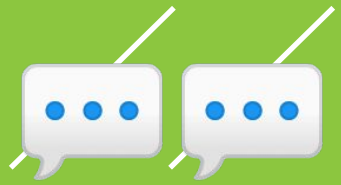
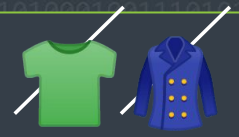


Updates

Hoodies



- Now taking preliminary orders!
- Can do either zip-up or pullover (my bad)
- Prelim estimate = £22.50 per hoodie

AGM  (Reminder)

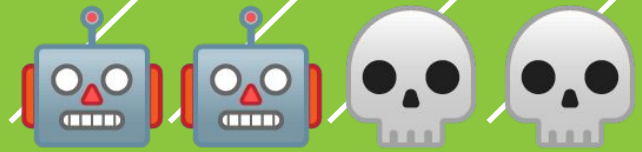
- Date: **16th April** ⏰⏰
- Will close nominations on the **9th April**
- Ask us any questions you have about the society/committee/roles!!
- **NOTE: YOU MUST BE AN ABERTAY STUDENT TO RUN**

- **Airtable has went out in emails & on Discord** 📬

Shindig 

- Shindig is an end of year event for SDI students, staff, & friends
- Formal event (black tie) with a buffet, ceilidh dancing, and more
- Tickets are £25 each
- **https://www.abertaysa.com/events/shindig**

ML is the start,
Skynet is the end!



Topics covered

- Whats is ML
- Example
- Q and A
- Resources

What is ML?

- ML vs AI
- Categories
- Models
- Flow
- Maths
- Python

ML vs AI

- ML subset of AI
- ML is narrow/weak AI

Categories

- Supervised Learning
  - Label data
  - Direct feedback
  - Email spam filter
- Unsupervised Learning
  - Unlabeled data
  - No feedback
  - Anomaly detection
- Reinforcement Learning
  - Decision Process
  - Reward
  - Self driving cars / Alphago / OpenAI

Models

- Neural Networks
- Support Vector Machines
- Bayesian Networks
- Genetic Networks

Flow

- Preprocessing
- Learning
- Evaluation
- Prediction

Maths

- Linear Algebra
- Statistics and Probability theory
- Multivariate Calculus
- Optimization

Python

Libraries:

- Tensorflow
- PyTorch
- NumPy
- SciPy
- Scikit-learn
- Pandas
- Matplotlib

Examples

Iris

https://scikit-learn.org/stable/auto_examples/datasets/plot_iris_dataset.html

https://gist.githubusercontent.com/curran/a08a1080b88344b0c8a7/raw/d546eaee765268bf2f487608c537c05e22e4b221/iris.csv

Q and A

Any Questions?

Recommendations

- Python Machine Learning: Machine Learning and Deep Learning with Python, scikit-learn, and TensorFlow, 2nd Edition
- Youtube
  - Siraj Raval
  - 3Blue1Brown
  - Google Developers
- https://ai.google/education/
- https://developers.google.com/machine-learning/crash-course/ml-intro
- https://www.tutorialspoint.com/machine_learning_with_python/index.htm
- https://www.geeksforgeeks.org/machine-learning/
- https://unity3d.com/machine-learning
- https://pytorch.org/tutorials/