Think Pacific Foundation

Action Project Reference: Create a detection software that can be utilized to detect credit card fraud.

Action Project Title: 51-45

Project Details:

Credit Card Fraud is one of the main issues with the increase in Online Payment over the last year. Think Pacific offers online card payment and would like to make use of a fraud detection program to identify frauds with sufficient accuracy. This may also be shared with our partners if particularly effective.

You can use either R or Python for this and the idea is to analyze the customer's usual spending behavior and mapping the location of these spendings to detect possible fraud. You would use the customer's transaction history as a dataset and simply ingest it into decision trees, artificial neural networks and logistic regression.

You can find the source code here on Kaggle

We are open and interested to see your personal approach and design ideas for this project and has provided fewer strict guidelines to allow for a creative and unique finished product.

Useful Links: Website |

Have any questions about this project? *Ask your mentor in your next meeting/drop-in or send them a message*

Key Research & Discussion Areas

Planning and Preparation

- An essential prerequisite for the project is to have Keras (a Deep Learning Library) and NLTK (a natural language processing toolkit) installed. You are welcome to use other libraries and language processing kits.
- Most Data Science Projects require the newest version of Python to be installed: https://www.python.org/downloads/release/python-390/
- Useful software for coding & debugging: https://www.spyder-ide.org/
- Think about where the code will be put to use:
  - what coding language works best here?
  - Does this require continuous maintenance?
  - Where will you retrieve graphics from?

Design

- Use the # to comment out explanations so that non-coders can understand the functions of the individual code pieces
- stick to user-friendly design
- Consider other data packages that could be useful to utilize to add value to your code
- Think about previously successful projects in this field.
  -What made them better than others?
  -What aspects should you take onto your project?
  -maintain usability without plagiarism

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Potential Barriers

- Think about how the code can be implemented into Websites / used by organizations (by individuals with little to no coding experience)
- Does this require further funding? Can this be implemented and run autonomously? Is further training for staff required?

Evaluation

- Does your design fit the requirements of the initial brief?
- How can you test that it works?
- Are there any weaknesses in your design that need to be mentioned? Highlighting these actually leads to a stronger proposal

Proposal

- How can you communicate the direction you have taken the project in your presentation? Explaining methodology and intention ensures a strong proposal
- Would a powerpoint be a nice way to present cover overall topics in the presentation?
- In what format is it best to deliver your code to TP?
- Would it be beneficial to walk those watching the presentation through your intentions for how your design can and should be implemented?

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