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CYBERSECURITY | INNOVATION . AWARENESS . TRAINING

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BACH: Adaptive Cybersecurity Awareness Training using Artificial Intelligence

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Cyber Awareness Training

Current efforts

- Text-based Training
  - Multiple choices, T/F
- Video Training
  - Watch pre-recorded videos
- Phishing Training
  - Generate phishing emails and wait people to click/download.

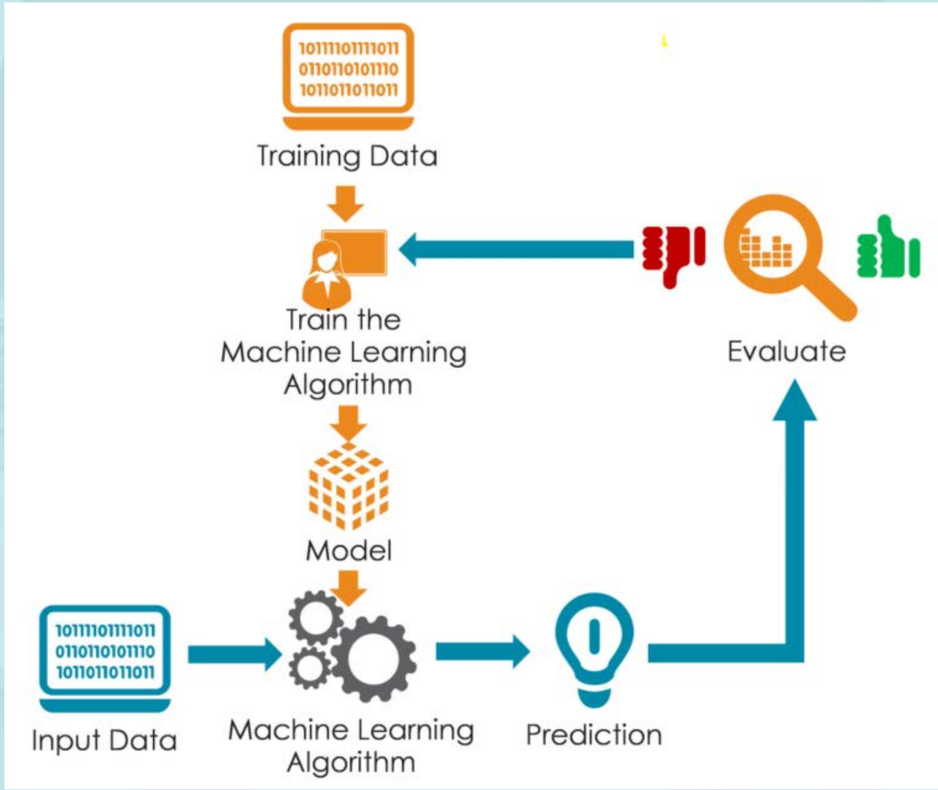
The Challenge

Improvement needed?

- ❖ Effective only in the beginning stage
  - No adaptation with the training
- ❖ Video may be too long
  - Less interesting and hard to follow
- ❖ Limited phishing tactics
  - Less effective with time

BACH – A Branch -AI-Charge Hybrid method in Cyber Awareness Training

- Combines adaptive learning methodology
- Interdisciplinary research technique
- Gamification of learning
- Artificial Intelligence (AI)

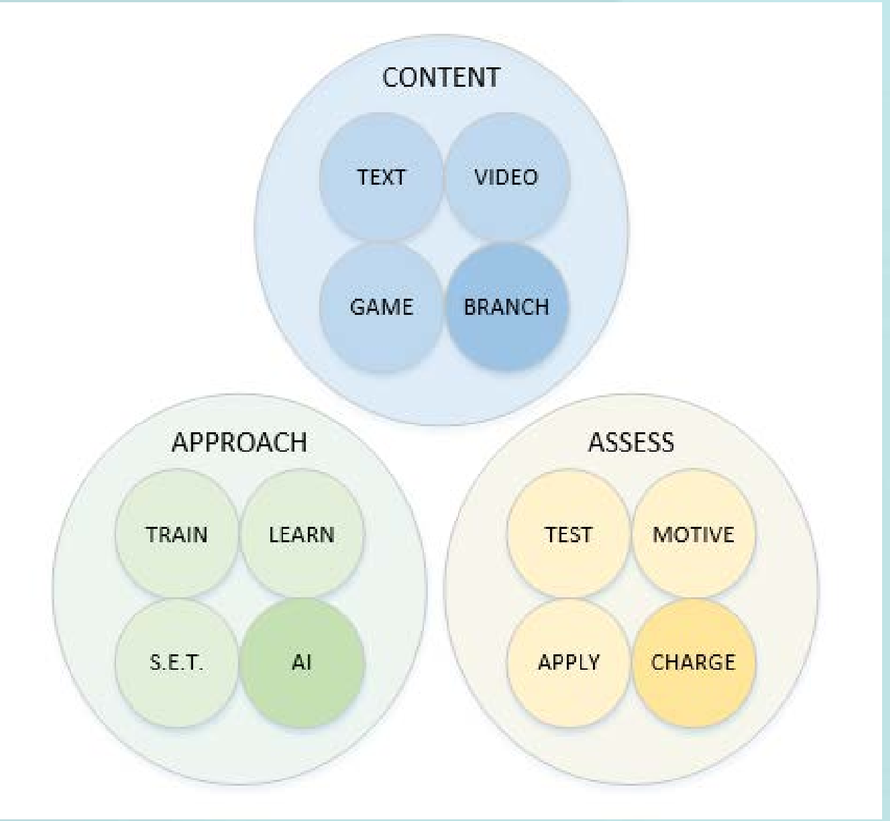


Amazon Web Services (AWS) AI Services

Approach

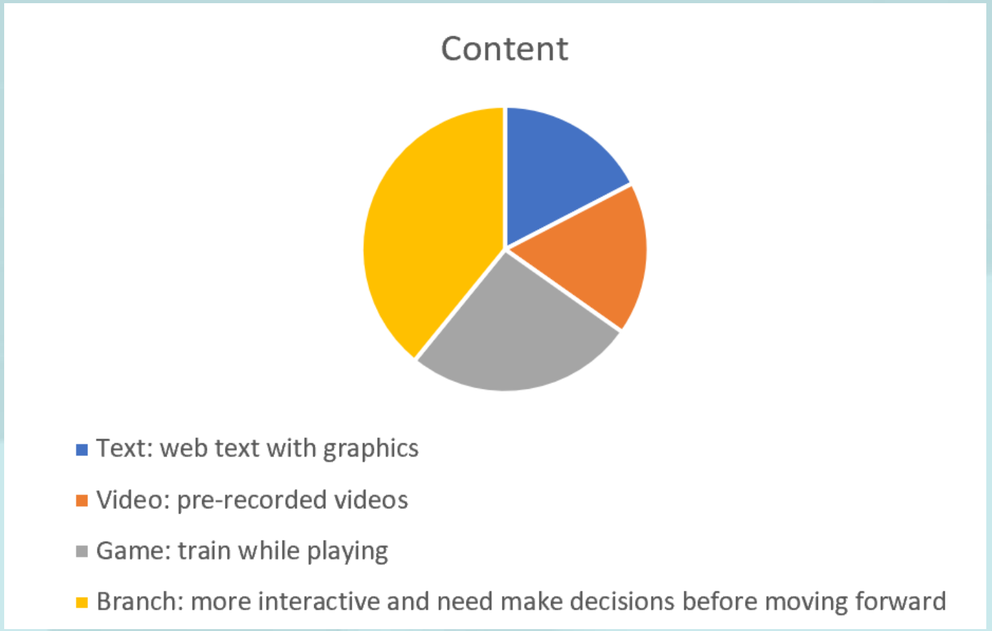
Four groups

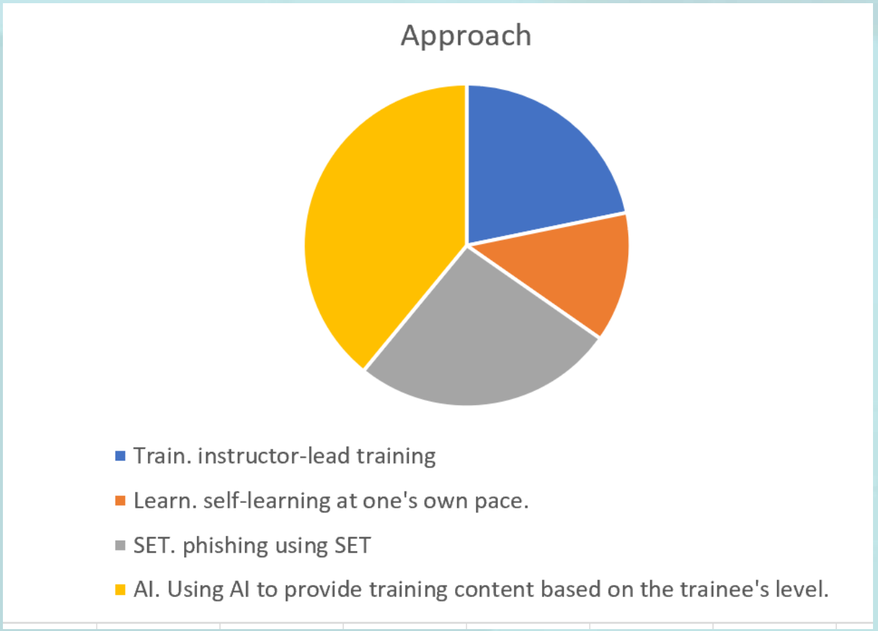
- Training in three categories: Content, Approach, and Assessment
- Each category is divided into four areas
  - Content: text, video, game, branch (non-linear)
  - Approach: train, learn, SET (social engineering), AI
  - Assessment: test, motive, apply, charge (in-charge training)
- Each group test one area

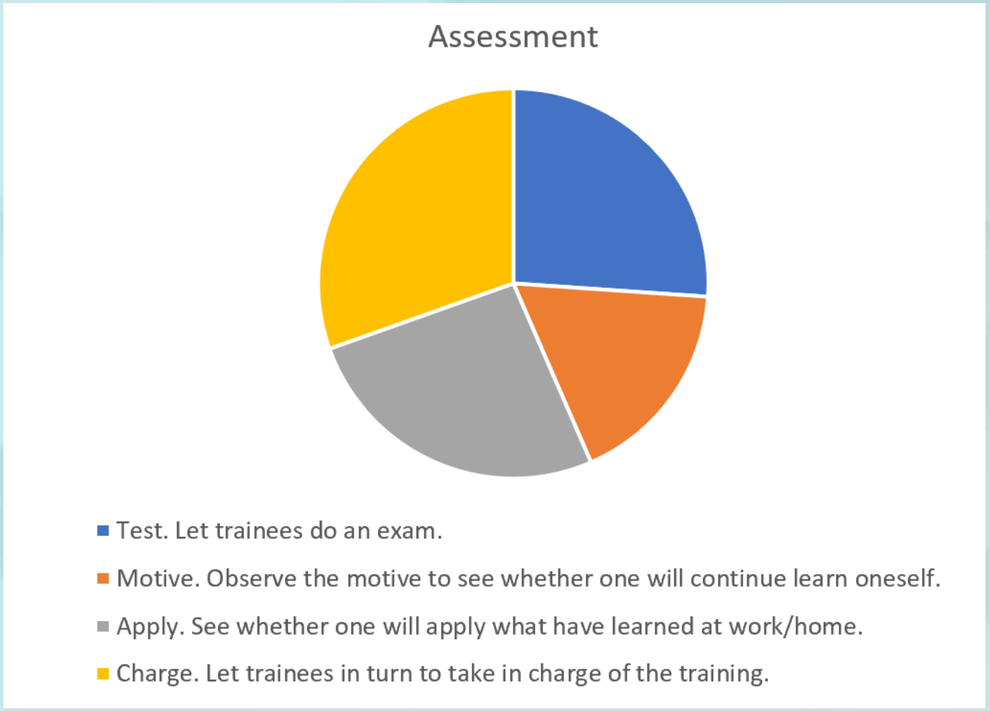


Experiments & Results

Total 24 students







Conclusions

- **Content**-wise, **Branched** material yield best training results.
  - Branch: more interactive and need make decisions before moving forward
- As for training **approach**, **AI** augmented **adaptive** training is most effective
  - AI: using AI to provide training content based on the trainee's level.
- For **assessment** method, let trainees to be in **charge** of the training is better
  - Charge: Let trainees in turn to be in charge of the training)

QUESTIONS? COMMENTS?

LET US KNOW!

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