

# TOWARDS GENERATION OF PHISHING TEXTS

## INTRODUCTION

- The security of data is becoming ever more important.
- Phishing is the most common type of social engineering.
- The abilities of companies and individual users to detect phishing emails are often limited.
- We present a work-in-progress for training tool which uses generated emails for simulations of different types of data theft.
- Such solution would enable automatic identification of fraudulent emails and could be used for preventing phishing attacks.

## PHISHING

### 1 Email threat categories

- Spam
- Malware
- URL phishing
- Scamming
- Spear phishing
- Domain impersonation
- Brand impersonation
- Extortion
- Business email compromise
- Lateral phishing
- Whaling
- Account takeover
- Ransomware

### 2 Attack types by the method

- Website spoofing
- Email spoofing
- Spear phishing
- Ransomware
- Trojan horse, content injection
- Keylogger & screen logger
- Man-in-the-middle attack

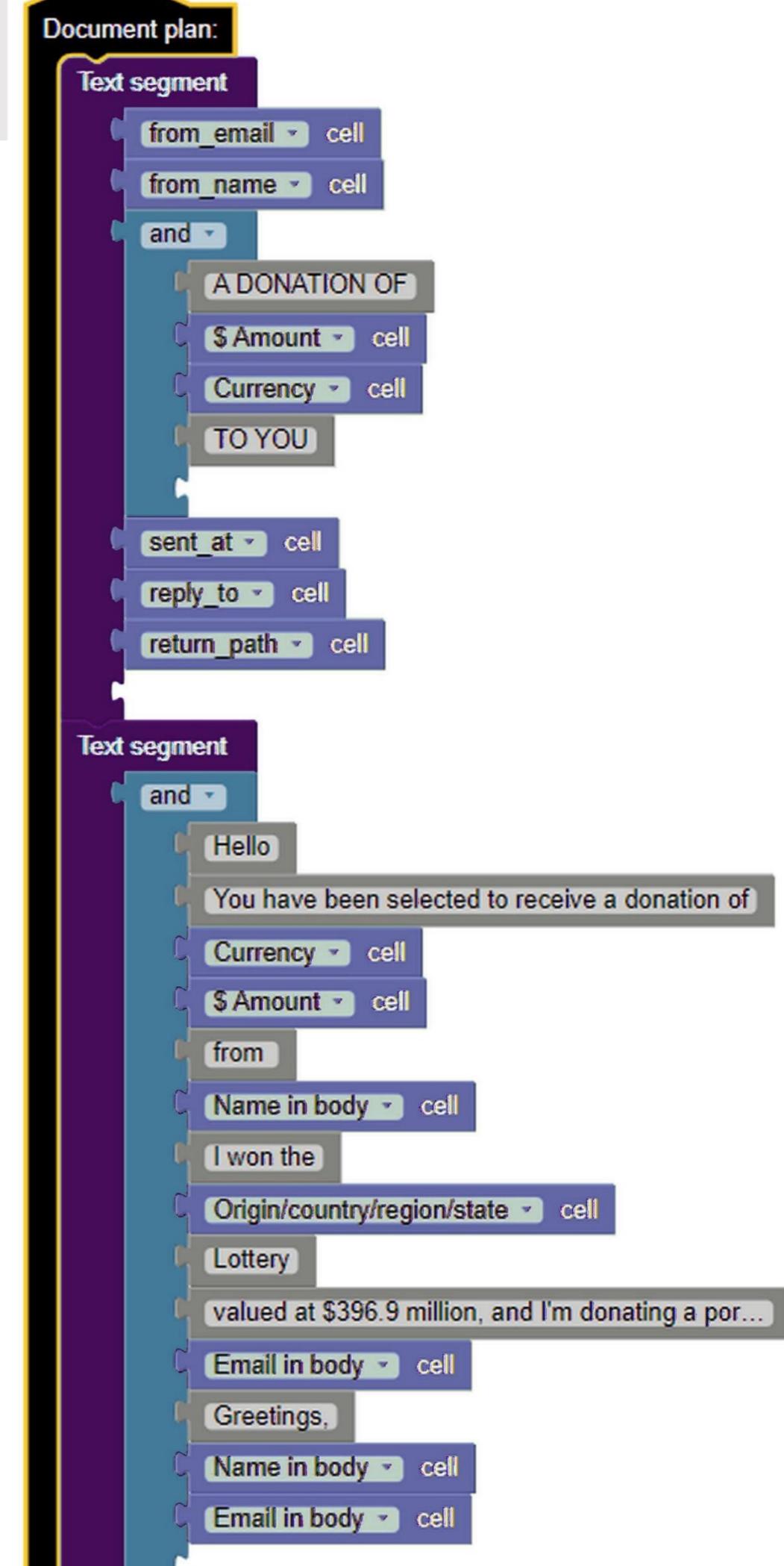
### 3 Attack by target

- Calendar invite
- Delivered at [...]
- Digest report [...]
- Deactivation (email, account)
- New message alert
- New task alert
- Payment request (invoice ready, etc.)
- Password expiration (change / retain)
- Shared document

## SET OF RULES

1	id	269197
	sent_at	2022-09-04 20:12:55
	subject	EN DONASJON P♦ 300 000 EURO TIL DEG
	subject_ENG	A DONATION OF 300,000 EUROS TO YOU
	from_email	mallyn@cedel.cu
	from_name	Elisabeth True
	E-I Yes1/No0	1
	reply_to	Elisabeth True
	return_path	mallyn@cedel.cu
	H-I Yes1/No0	1
	E-H Yes1/No0	1
	category	scam
	risk	2
	risk_source	signature
	Link_txt	
	links_count	0
	FILENAME_txt	
	GOOD/BAD file extension (reikia išsito)	0
	attachments_count	0
	Name in body	Elisabeth True
	Profession	
	Origin/country/region	Nigeria
	Email in body	sheryllclaiminc509@gmail.com
	E-W Yes1/No0	1
	Organisation/Company	
	Address	
	\$ Amount	300,000.00
	Currency	\$

### 2 Document plan:



## RESULTS

### Text Generation Samples

**Mailyn@cedel.cu Elisabeth True A DONATION OF 300,000.00 \$ TO YOU 2022-09-04 20:12:55 Elisabeth True mallyn@cedel.cu.**  
 Hello You have been selected to receive a donation of \$ 300,000.00 from Elisabeth True I won the Nigeria Lottery valued at \$396.9 million, and I'm donating a portion of it to ten lucky people and charities. This donation is in memory of my late son who died of cancer and the improvement of the lives of many people affected by this coronavirus. Reply to this email for more information: sheryllclaiminc509@gmail.com Greetings, Elisabeth True sheryllclaiminc509@gmail.com.

## CARD

CENTRE  
FOR APPLIED  
RESEARCH  
AND  
DEVELOPMENT

## CONCLUSIONS

- The methodology focuses on simulations of different types of actions the victims of data theft are forced to perform through emails.
- Combination of NLP and rules allows wider variation of text structure to avoid repetitiveness and rigidity in the generated emails.

## FUTURE PLANS

- Creating sets of rules (document plans) for generation of higher variety of malicious emails.
- Using different language models for generation.
- Possible reuse of the tool for other text types.
- Simulating texts for various scenarios such as cyber or propaganda attacks.

