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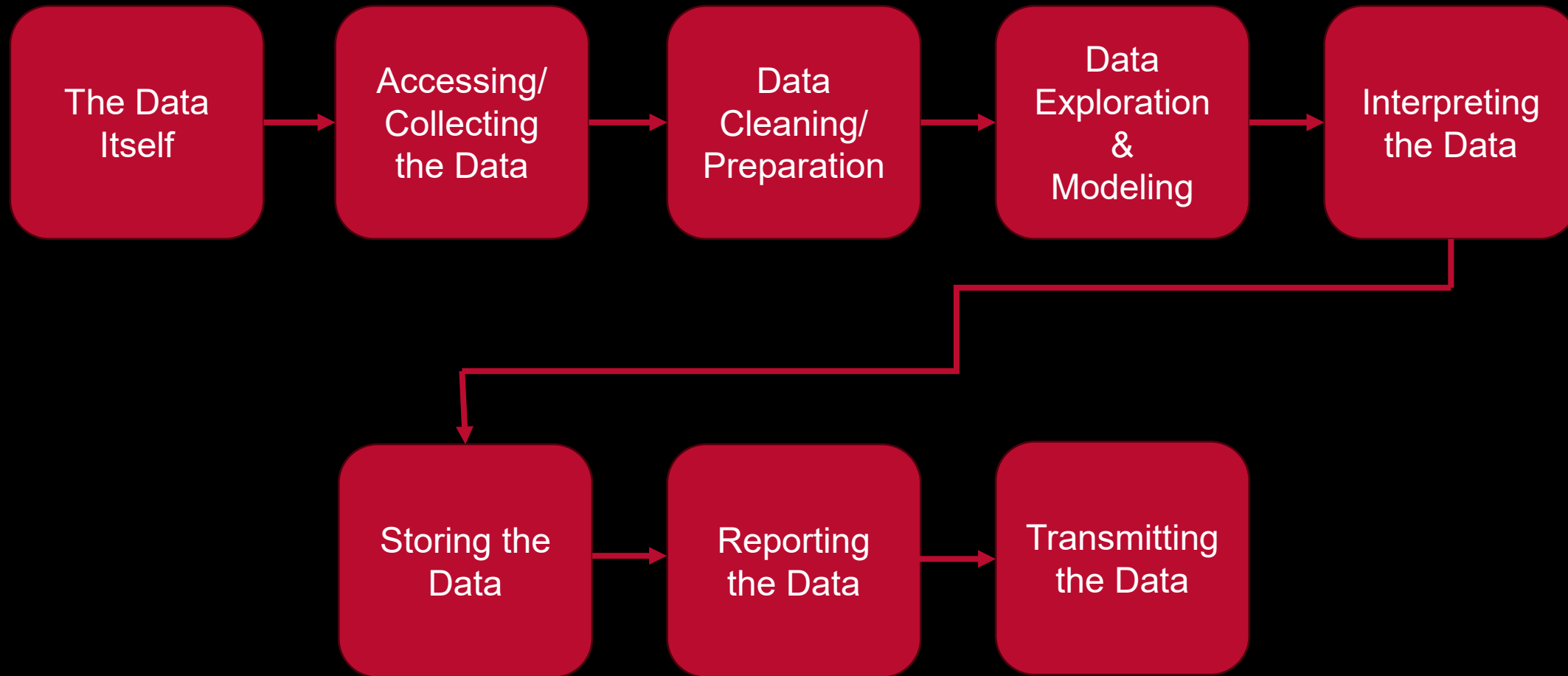


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Balancing Data Accessibility and Security in the Age of AI



Navigating the Complexities of Modern Data Analytics
Mark Lupo, MBA, MBCP, CompTIA Sec+



The Data Analytics Process



What part of the data analytics process concerns you the most (from a cybersecurity/artificial intelligence perspective)?

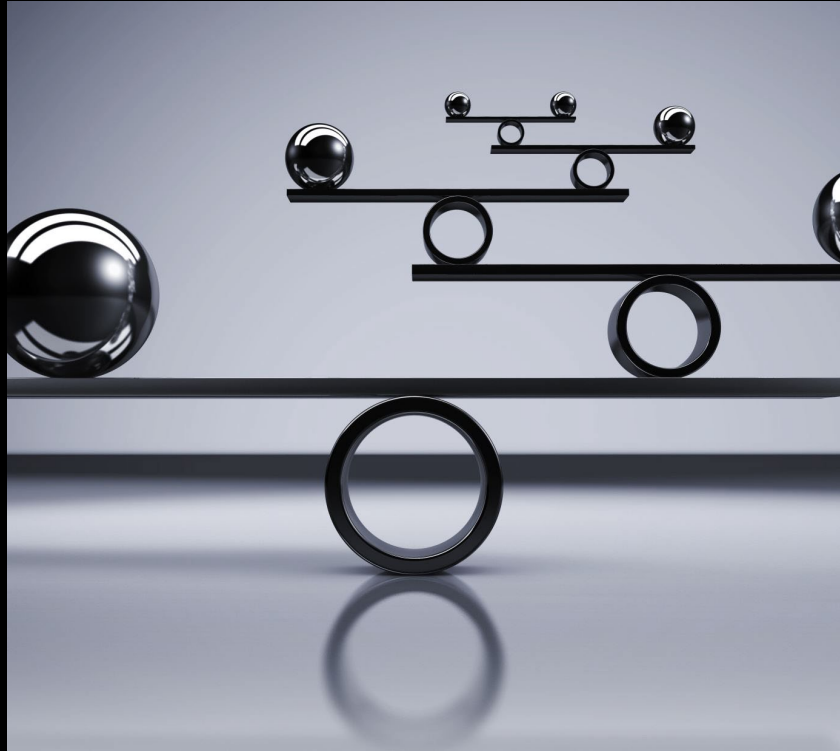
- Accessing inaccurate data produced by a biased AI platform
- Inaccurate/hallucinogenic output
- Security of the data while stored (at rest)
- Security of the data while in transit
- Other



How do we find the Balance?

Data Accessibility:

1. Enables quick, informed decision-making.
2. Fosters innovation and efficiency.
3. Empowers teams with real-time insights.



Data Security:

1. Protects sensitive information from cyber threats.
2. Ensures compliance with data protection regulations.
3. Maintains trust and integrity in data analytics.



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The Data Dilemma: Access vs. Security

How do you ensure data is both available to those who need it and, at the same time, protected from unauthorized access?



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What strategies does
your organization use
to verify the integrity
and accuracy of data
before it's used for
decision-making?



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First, Let's
clarify some
terms

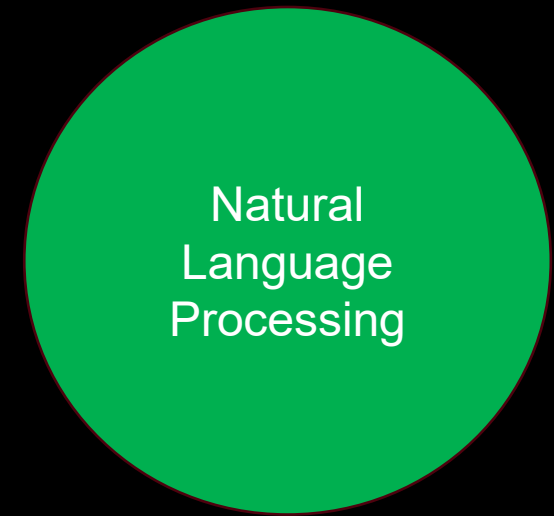
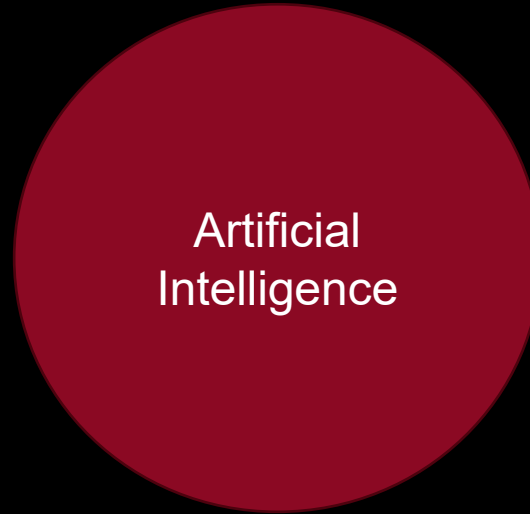
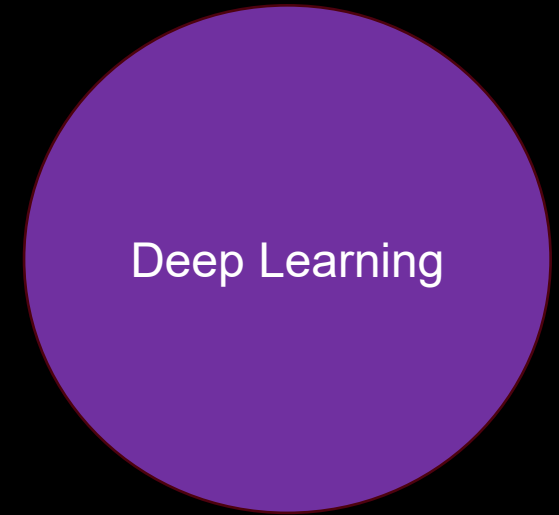
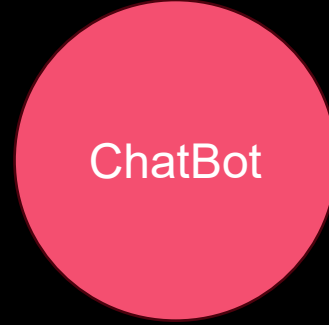
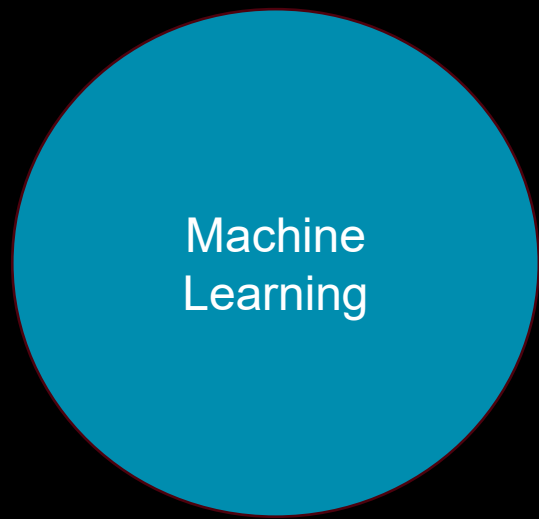


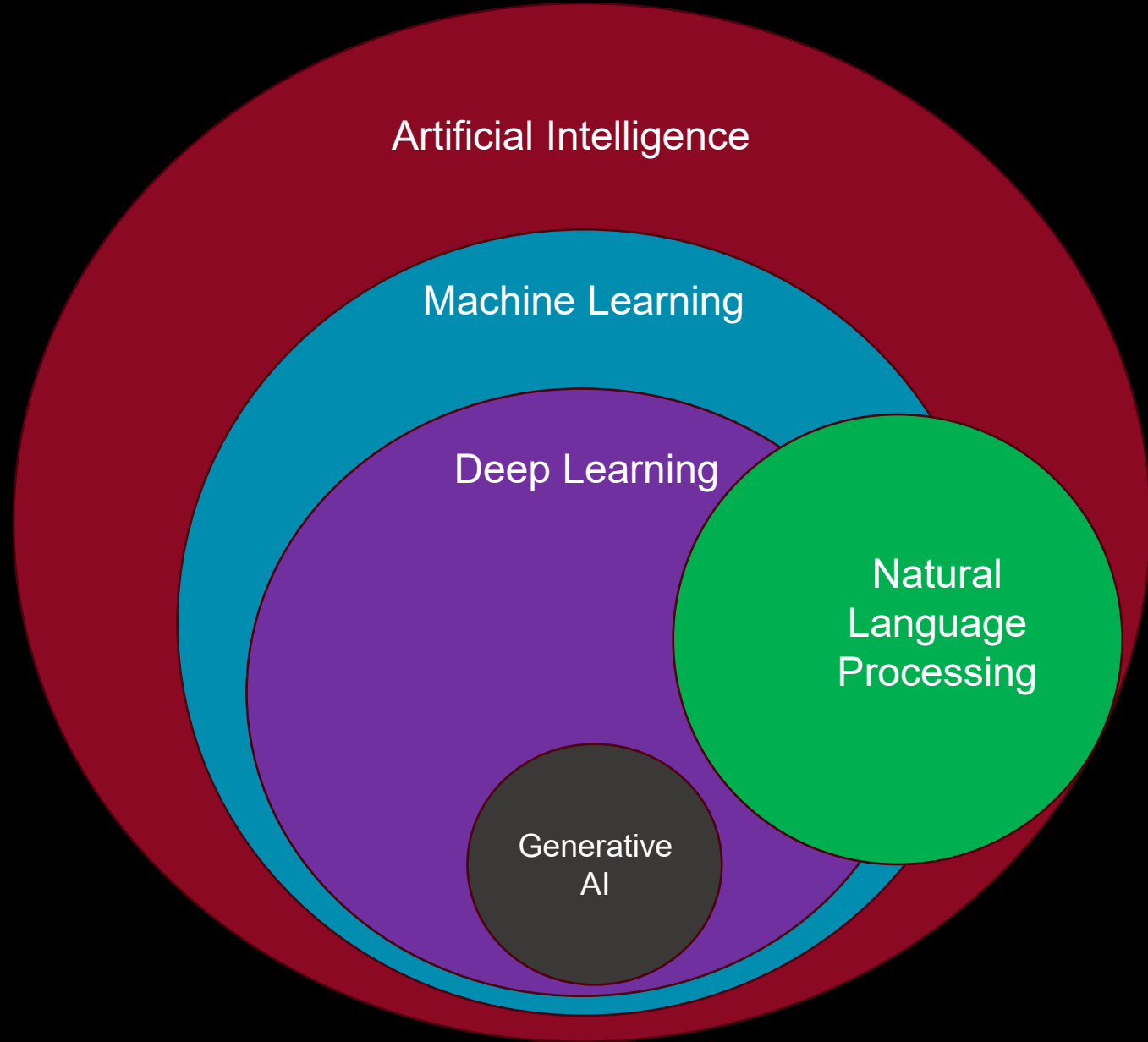
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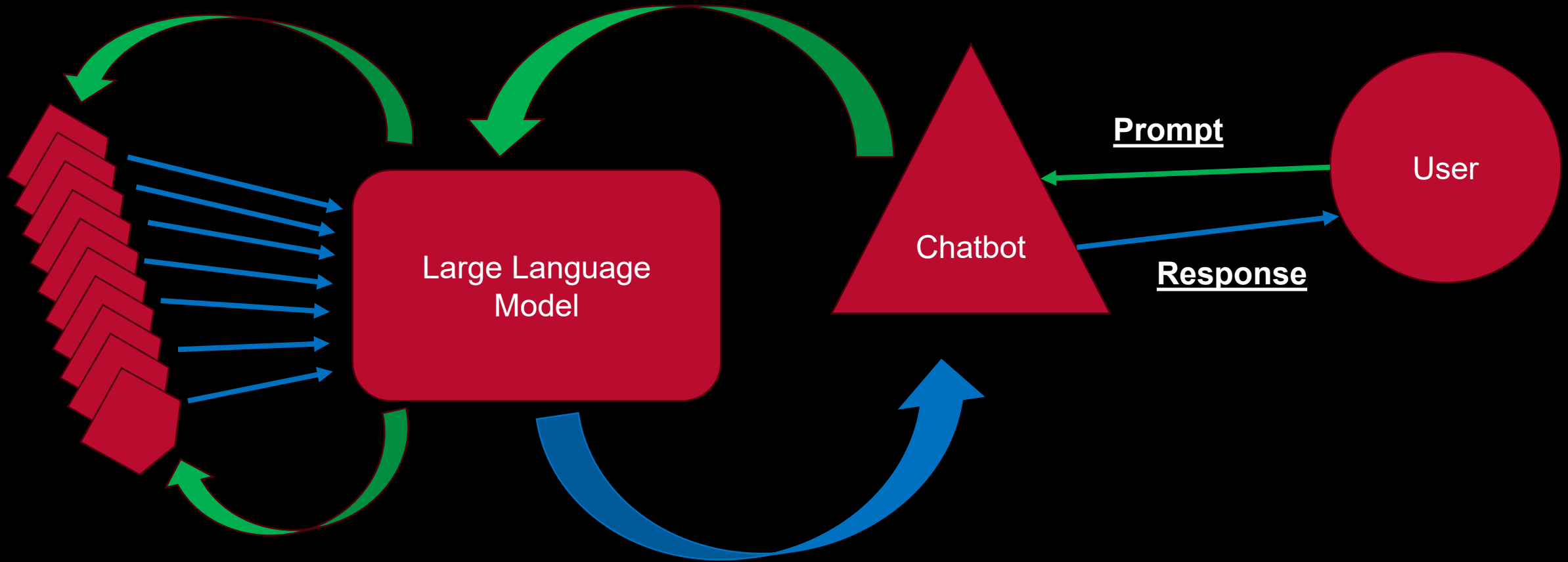
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What is a Chatbot and how does it relate to a large language model?



The Data Dilemma: Access vs. Security

How frequently are you using artificial intelligence tools in your data analytics role?

What platforms are you using?

How are you using them?

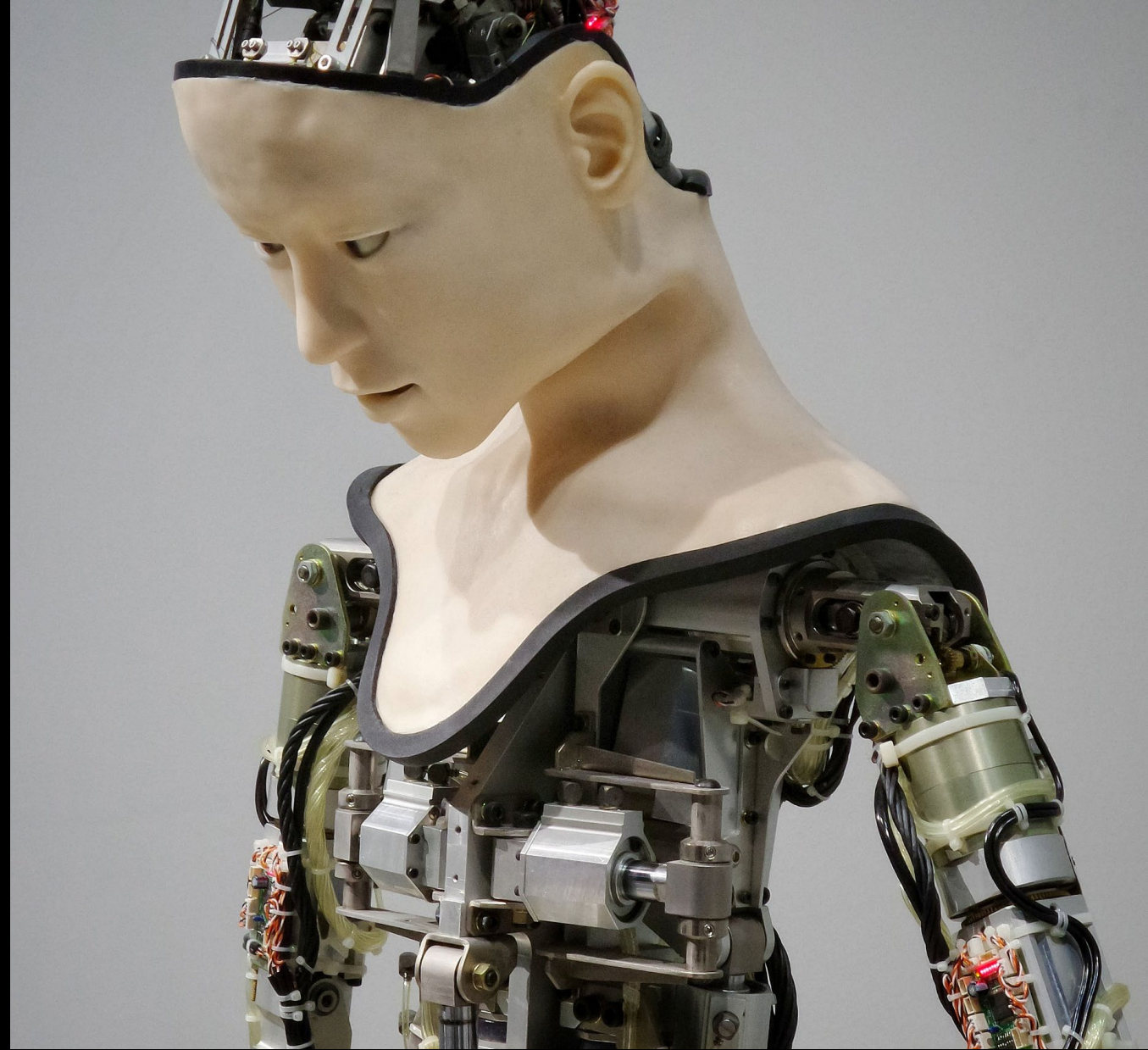




How does your
organization
currently balance
data accessibility
with security when
using AI-driven
tools?

What Keeps You Up at Night?

What specific AI-generated threats are you most concerned about in your organization?



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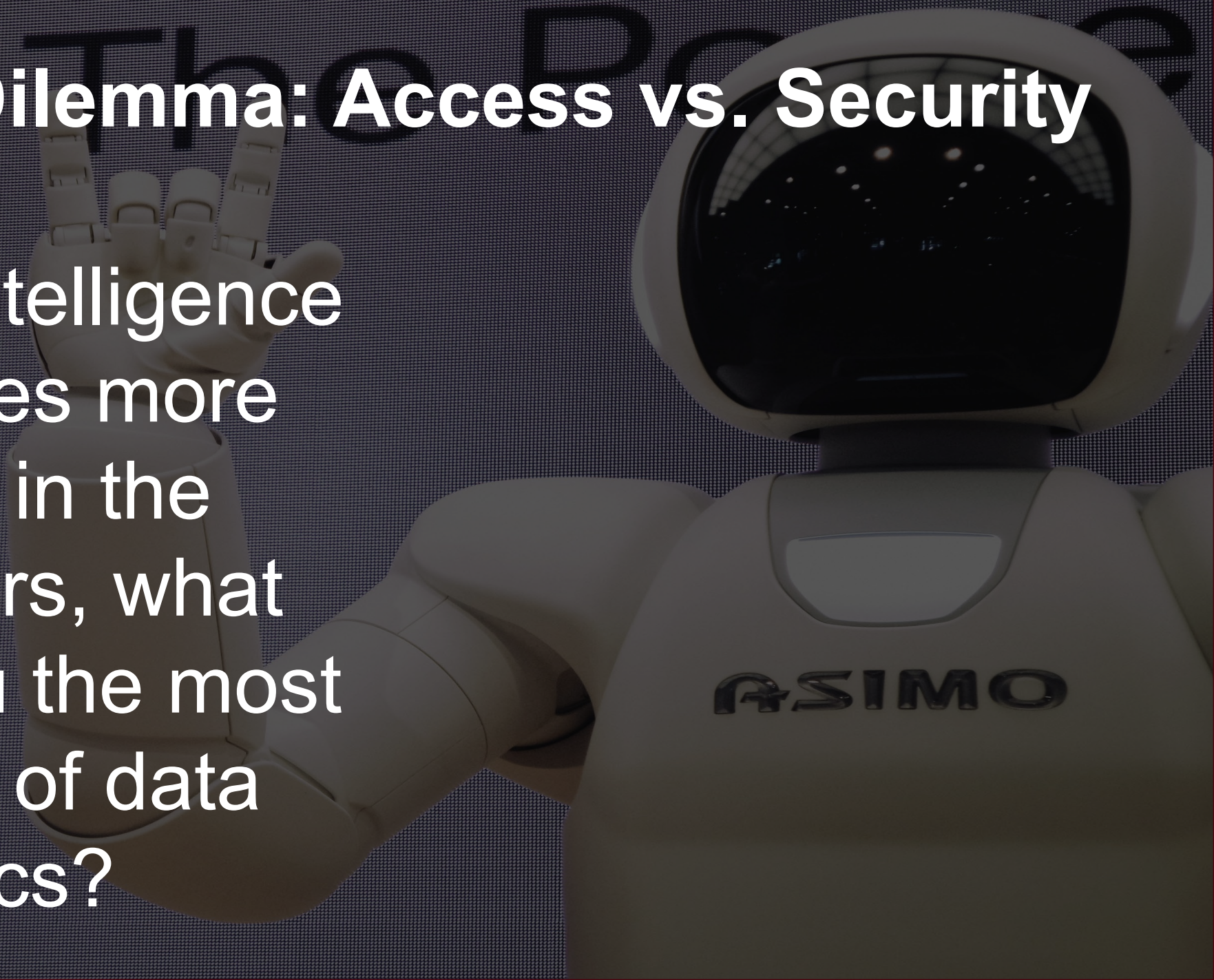


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The Data Dilemma: Access vs. Security

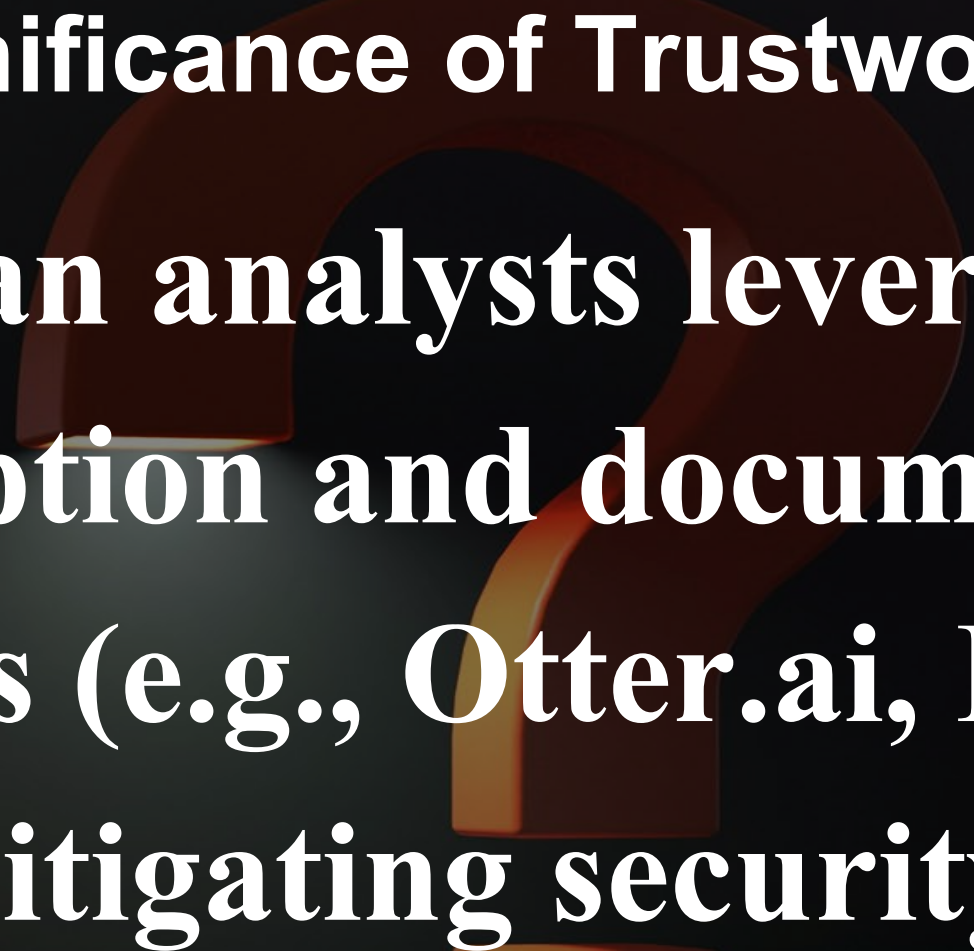
As artificial intelligence use becomes more prevalent in the coming years, what concerns you the most in the area of data analytics?



The Significance of Trustworthy Data

What steps do you take to protect sensitive data from AI-generated threats like deepfake phishing or synthetic media manipulation?





The Significance of Trustworthy Data

**How can analysts leverage AI
transcription and documentation
platforms (e.g., Otter.ai, ReadMe)
while mitigating security risks?**



The Significance of Trustworthy Data

How do you and your organization ensure third-party AI vendors align with security best practices?



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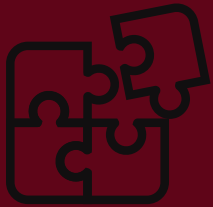
**The Significance of
Trustworthy Data**

**What role does AI
play in disaster
response and crisis
management for you
and your
organization?**

The Significance of Trustworthy Data

How do we best prepare for the future of AI in cybersecurity and data management?





Take the
Next Step

Individual/Employee Cyber Preparedness...

6 Steps to Strengthening Your Online Cyber Presence



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Defense in Depth



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Some Initial Steps...

1. Monitor your personal credit reports
 - Annualcreditreport.com
 - Recommend freezing your credit at all three credit reporting agencies
2. Create an account <https://www.irs.gov/payments/view-your-tax-account>
 - Review account to ensure accuracy of information
3. Review your annual Social Security Statement
 - Establish an account profile at <https://www.ssa.gov/myaccount/>
 - Verify your income and ensure it is accurate
 - Sometimes thieves will use your SSN to be hired and their income shows up as your income
4. My e-Verify
 - <https://myeverify.uscis.gov/>
 - Enables you to view your E-Verify case history, resolve cases, lock your SSN, and confirm your employment eligibility.



Rank	2015	2016	2017	2018	2019
1	123456	123456	123456	123456	123456
2	password	password	password	password	123456789
3	12345678	12345	12345678	123456789	qwerty
4	qwerty	12345678	qwerty	12345678	password
5	12345	football	12345	12345	1234567
6	123456789	qwerty	123456789	111111	12345678
7	football	1234567890	letmein	1234567	12345
8	1234	1234567	1234567	sunshine	iloveyou
9	1234567	princess	football	qwerty	111111
10	baseball	1234	iloveyou	iloveyou	123123

2020	2021	2022	2023	2024
123456	123456	123456	1. 123456	123456
123456789	123456789	123456789	2. 123456789	12345
picture1	12345	qwerty	3. qwerty	123456789
password	qwerty	password	4. password	password
12345678	password	1234567	5. 12345	iloveyou
111111	12345678	12345678	6. qwerty123	princess
123123	111111	12345	7. 1q2w3e	1234567
12345	123123	iloveyou	8. 12345678	rockyou
1234567890	1234567890	111111	9. 111111	12345678
senha	1234567	123123	10. 1234567890	abc123

6002641CFB067C9C94906A2:586071,BBDC5AD111CEF8744DDB460F32FF976BD09FD08B:
:573736,F18CE40C9190C9A32A16EE0B1C8DD7013178445D:573297,068CC94A2DBAD94C
777C6EA07F9E05AB6CD8B38D7:572627,B7C40B9C66BC88D38A59E554C639D743E77F1B6
D5:557507,5FA339BBB1EEACED3B52E54F44576AAF0D77D96:547528,3ACD0BE86DE7DC
16BE23842A5BCA7D69F29F69D77:513929,CB45C671CBC500627EA424EEA5F91996221B5
8392:505507,775BB961B81DA1CA49217A48E533C832C337154A:489024,C60266A8ADAD
AE95CDDF6246BE4AA3EB058DD8373:452079,3EFCFC1E7F34E78A937E81171BA51DC39538
8C9:4426279BA01:434784,2D27B62C59
C69:99257D3831A1AF040
547:399592,42849ADE
29D:4FC:389398,3D0F3B9DDCACEC30C4008C5E030E6C1
FED18E37C7375547,144D946202166F0C33C21FF3C24F967BFAAC126F:370783,FBA9F1

**A computer can guess more than
100,000,000,000 passwords per second. Still
think yours is secure?**

September 15, 2020 1:01am EDT



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1. Use a Digital Password Manager

The Dashlane logo features a stylized blue icon of a building or structure to the left of the word "DASHLANE" in a bold, blue, sans-serif font.The Bitwarden logo consists of a white shield icon with a keyhole in the center, followed by the word "bitwarden" in a white, lowercase, sans-serif font on a dark blue background.The Keeper logo features a yellow circular icon with a black circuit-like pattern, followed by the word "KEEPER" in a white, uppercase, sans-serif font.The RoboForm logo shows a green robot head icon with two eyes, followed by the word "RoboForm" in a bold, black, sans-serif font.The LogMeOnce logo features the word "LogMeOnce" in a blue and orange sans-serif font, with the tagline "PasswordLess & Smarter Identity Management" in a smaller font below it.The NordPass logo includes a teal mountain-like icon to the left of the word "NordPass" in a bold, black, sans-serif font.The LastPass logo features the word "LastPass" in a black and red sans-serif font, followed by three red dots and a vertical line.

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FILTERS



Search favorites

- ✓ All vaults
- ✓ **My vault**
- + New organization

- ✓ All items
- ★ **Favorites**
- 🌐 Login
- 📄 Card
- 👤 Identity
- 📝 Secure note

- ✓ Folders +
- 📁 A UGA SBDC
- 📁 Business
- 📁 CyberArch Docume...
- 📁 Elaine's
- 📁 Law Enforcement
- 📁 Lupo Enterprises, LLC
- 📁 Lupo Properties, Inc.
- 📁 Personal
- 📁 Personal

My vault

+ New item

☐ All Name Owner

☐ Chat GPT Me



EDIT ITEM

Name

CR2 - CyberArch

Folder

The University of Georgia

Username

N-a.o8

Password

.....

Authenticator key (TOTP)

15

URI 1



Match detection

Default match detection

+ New URI

Notes



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EDIT ITEM

Name	Folder
<input type="text" value="CR2 - CyberArch"/>	<input type="text" value="The University of Georgia"/>
Username	Password
<input type="text" value="N-a.o8"/>	<input type="password" value="....."/>
Authenticator key (TOTP)	
<input type="text" value=""/> 15 --- ---	
URI 1	Match detection
<input type="text" value=""/>	<input type="text" value="Default match detection"/>
+ New URI	
Notes	



Log in

Log in

Reset your password

Username *

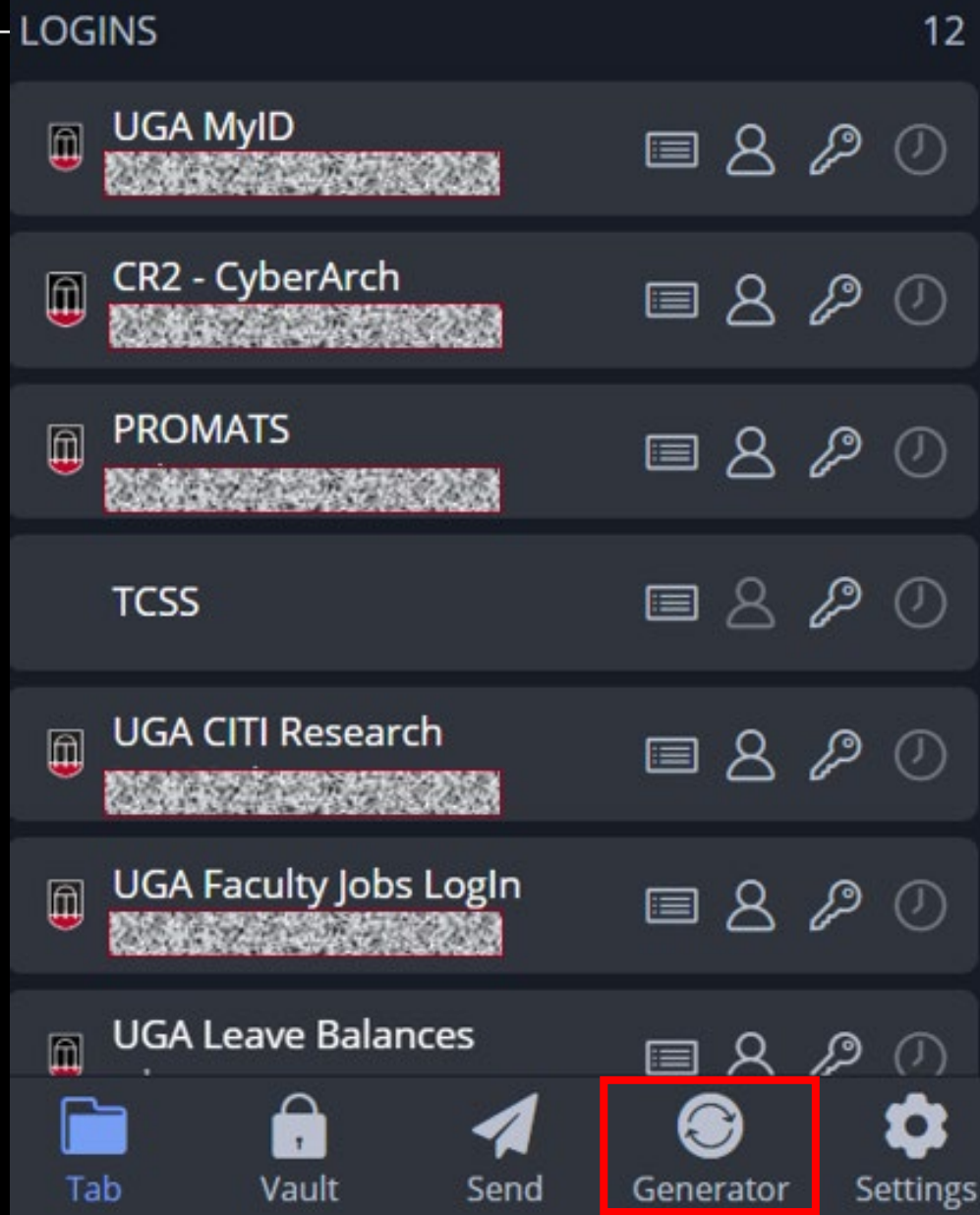
Enter your CVIOG CyberArch username.

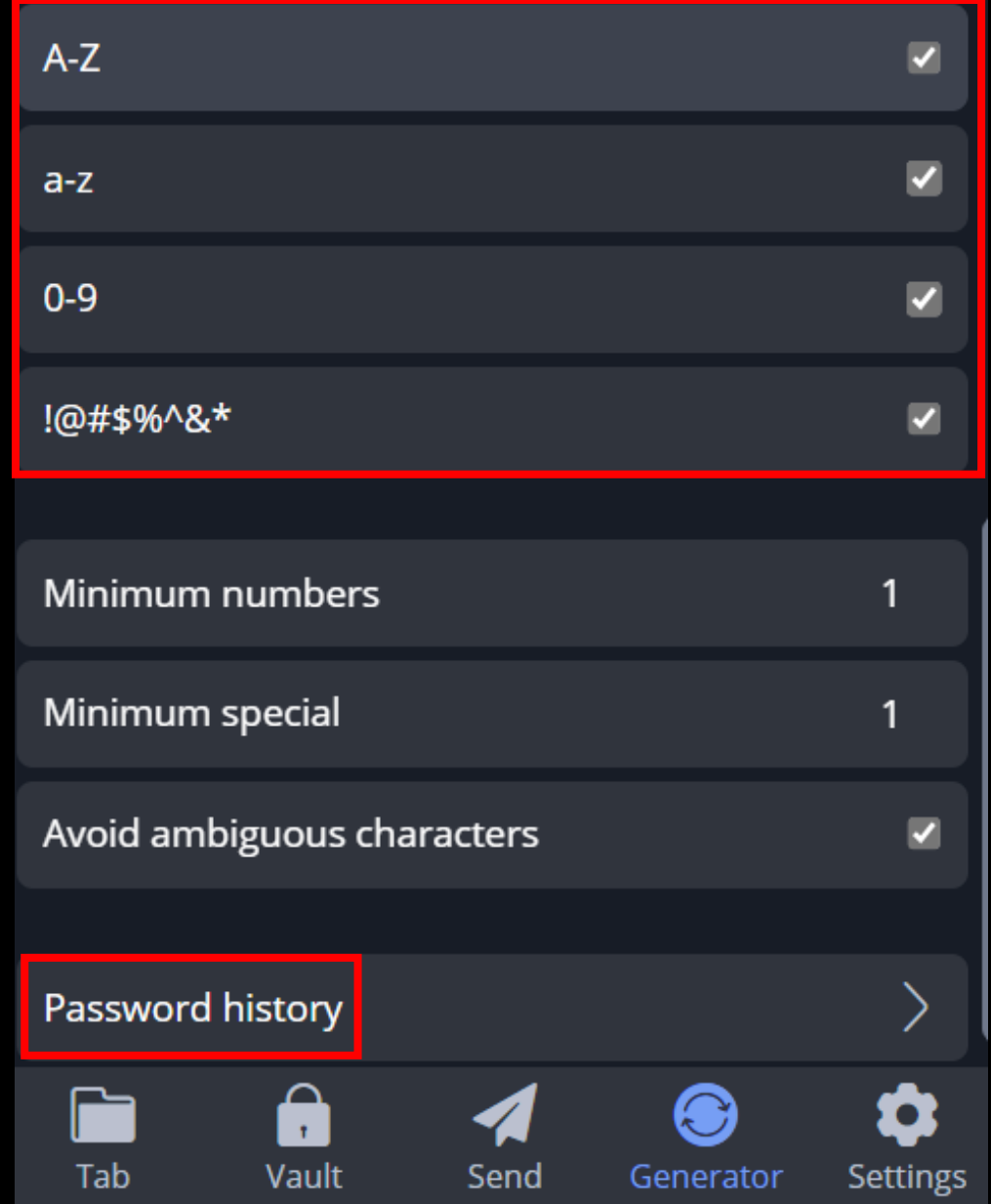
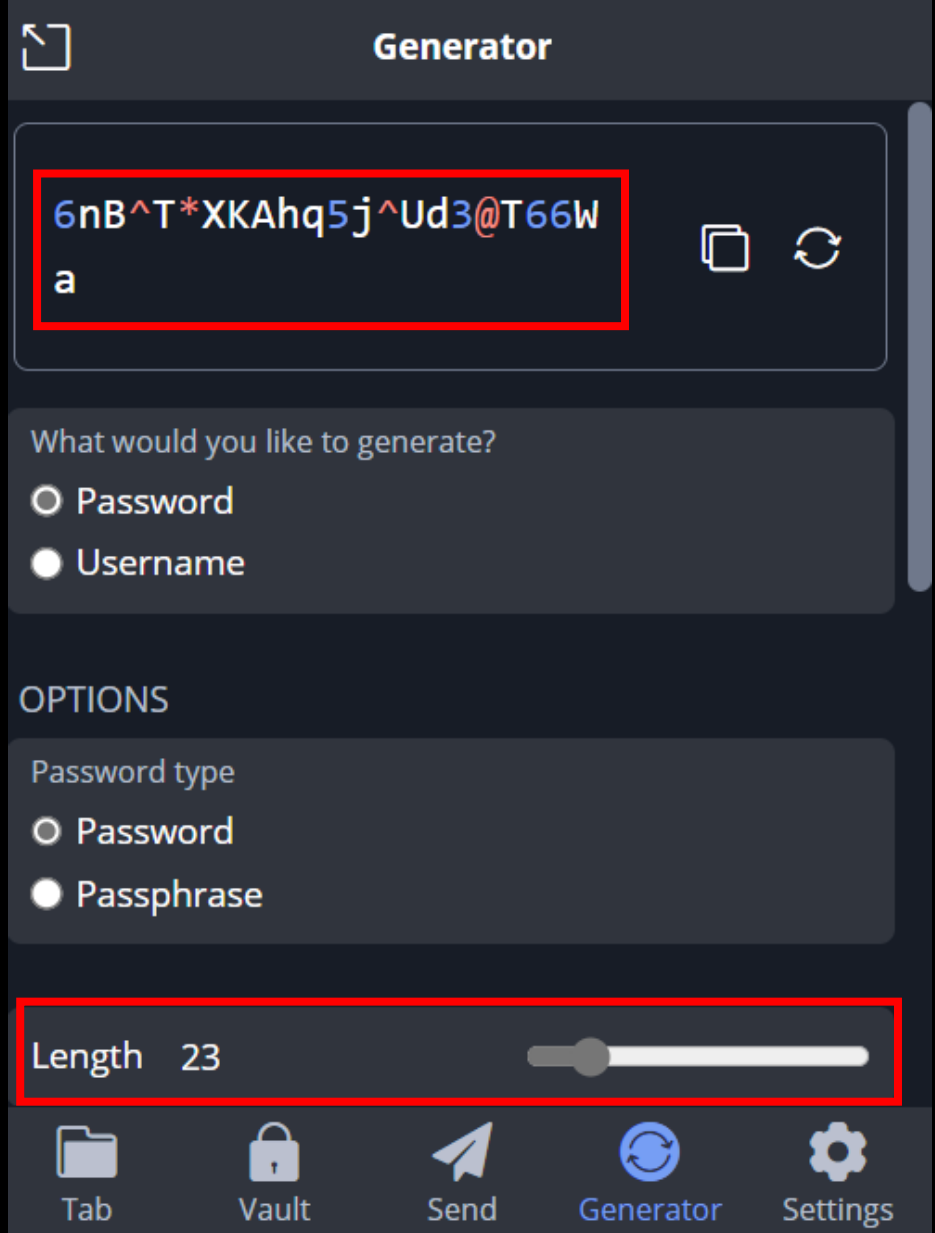
Password *

Enter the password that accompanies your username.

Log in







2. Passwords

- Identify two banking accounts and change your passwords

- From something like WeareUGA phrase to
!wE4Are5uG8a@nAationaltitl3e

<https://www.security.org/how-secure-is-my-password/>



<https://www.security.org/how-secure-is-my-password/>

security.org Home Security Smart Home Digital Security About Us Privacy Analyzer GPT

sponsored ad

 **KEEPER** Your passwords will always be secure with Keeper.  [Start Free Trial](#)

How Secure Is My Password?

✓ The #1 Password Strength Tool. Trusted and used by millions.

.....

It would take a computer about

93 trillion years

How long
for your
password
to be
cracked?



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3. UserNames

- **Change your username**
- **From 'yourname' or your email address to a phrase such as, 4wE&cA9n#Dol+t**



So, What is a PassKey?

.... And Why is it More Secure

Public and Private Keys

<https://youtu.be/p-8l98O9lhw?t=207>



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4. Multi-Factor Authentication (MFA)

- What is it and how do I find it?
- Implement at least, two factor authentication (2FA)
 - Text
 - Email
 - Biometric
- Not just bank accounts
 - Consider Google, QBO, Amazon, Facebook, X (Twitter), etc.



5. Off Site Backup

- **Activate an online cloud back-up solution**
 - **Carbonite**
 - **Iron Mountain**
 - **VEEAM Endpoint Backup - Free**
 - **Mirror Images vs. file backups**
 - **External Hard Drive**
 - **Test your back up**



6. Begin using a Virtual Private Network (VPN)

What is a VPN?

- It creates a secure tunnel between you and the Internet
- It masks your location
- It secures your data transfers

How do I obtain a VPN?

- Search for “the best VPN in 2025”
- Pay versus free versions
- Obtain one with an app for use on mobile devices
- Usually will select one with 2 or more connections simultaneously from multiple devices – varies by VPN provider





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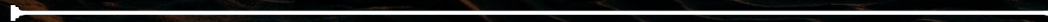
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“

“The race is not always to the swift, but to those who keep on running.”

Anonymous



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