Technology Trends Shaping the Future of Local Governments

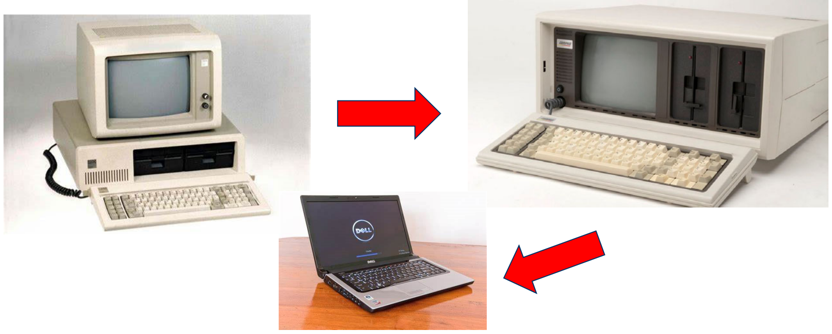
CMFO/CCFO Training
2023

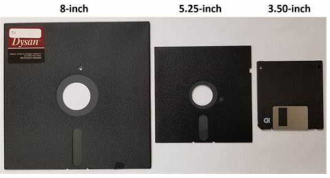
Tennessee
Comptroller
of the Treasury

The past 40 years...

Tennessee
Comptroller
of the Treasury

The past 40 years...

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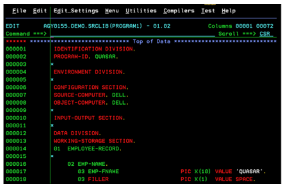
3

The past 40 years...



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EDIT       AGY0155.DEMO.SRCLIB(PROGRAM1) - 01.02           Columns 00001 00072
Command ===>                                                  Scroll ===> CSR
****** ************************** Top of Data ******************************
000001         IDENTIFICATION DIVISION.
000002         PROGRAM-ID. QUASAR.
000003        *
000004         ENVIRONMENT DIVISION.
000005        *
000006         CONFIGURATION SECTION.
000007         SOURCE-COMPUTER. DELL.
000008         OBJECT-COMPUTER. DELL.
000009        *
000010         INPUT-OUTPUT SECTION.
000011        *
000012         DATA DIVISION.
000013         WORKING-STORAGE SECTION.
000014         01  EMPLOYEE-RECORD.
000015        *
000016             02 EMP-NAME.
000017                03 EMP-FNAME                PIC X(10) VALUE 'QUASAR'.
000018                03 FILLER                   PIC X(1)  VALUE SPACE.
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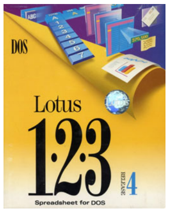
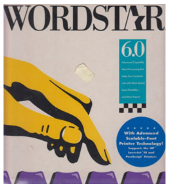

DOS
Lotus
1-2-3
Release 4
Spreadsheet for DOS


WORDSTAR
6.0

Symphony
Lotus

Office 365

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Trends in Technology

- Cloud Computing
- Blockchain/Cryptocurrency
- Robotic Process Automation (RPA)
- Artificial intelligence (AI)

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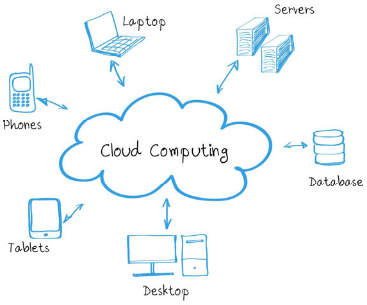
Cloud Computing

- Benefits:
  - Cost-effectiveness
    - Less hardware/software
    - No on-site server
    - Ease of system upgrades
  - Security
    - Data encryption
    - System access controls
    - Cybersecurity
    - Disaster Recovery


Laptop
Servers
Phones
Cloud Computing
Database
Tablets
Desktop

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Blockchain

- Data storage technology
- Distributed ledger
  - Public (Bitcoin, Ethereum)
    - Accessible to anyone
    - Used for cryptocurrency transactions
    - Smart contracts
    - NFTs
  - Private
    - Accessible to authorized users
    - Used by banks or insurance companies

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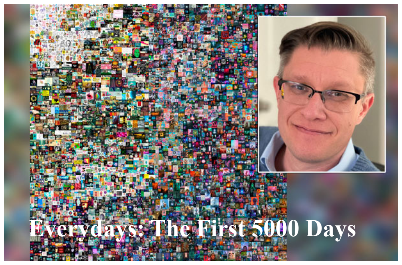
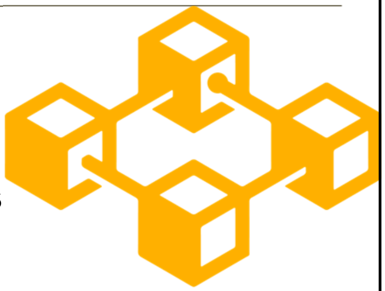
NFT
Non-fungible token


Everydays: The First 5000 Days

KINGS OF LEON
POWERED BY YELLOWHEART
NFT
YOURSELF

DECENTRALAND

Blockchain



- Potential Uses:
  - Property titles and deeds
  - Motor vehicle registrations
  - Property assessments
  - Smart contracts
  - Accounting transactions

Cryptocurrency

ethereum
ethe

Cryptocurrency

Cryptocurrency

◆ The Cons:
- Crypto does not generate cash flow
- **Crypto is not stable**
- **Crypto has no underlying value**
- **Crypto is inherently speculative**
- **Crypto is tied to ransomware**
- Regulation is lacking

BITCOINS
BITCOINS

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Cryptocurrency - Mining

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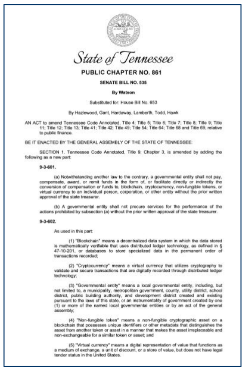
Cryptocurrency

Public Chapter 861

- Governments can't pay, compensate, award, or remit funds in the form of cryptocurrency
- State Treasurer would have to grant approval



State of Tennessee

PUBLIC CHAPTER NO. 861

SENATE BILL NO. 535

By Watson

Substituted for: House Bill No. 653

By Hazlewood, Gant, Hardaway, Lamberth, Todd, Hawk

AN ACT to amend Tennessee Code Annotated, Title 4; Title 5; Title 6; Title 7; Title 8; Title 9; Title 11; Title 12; Title 13; Title 41; Title 42; Title 49; Title 54; Title 64; Title 68 and Title 69, relative to public finance.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF TENNESSEE:

SECTION 1. Tennessee Code Annotated, Title 9, Chapter 3, is amended by adding the following as a new part:

9-3-601.

(a) Notwithstanding another law to the contrary, a governmental entity shall not pay, compensate, award, or remit funds in the form of, or facilitate directly or indirectly the conversion of compensation or funds to, blockchain, cryptocurrency, non-fungible tokens, or virtual currency to an individual person, corporation, or other entity without the prior written approval of the state treasurer.

(b) A governmental entity shall not procure services for the performance of the actions prohibited by subsection (a) without the prior written approval of the state treasurer.

9-3-602.

As used in this part:

(1) "Blockchain" means a decentralized data system in which the data stored is mathematically verifiable that uses distributed ledger technology, as defined in § 47-10-201, or databases to store specialized data in the permanent order of transactions recorded;

(2) "Cryptocurrency" means a virtual currency that utilizes cryptography to validate and secure transactions that are digitally recorded through distributed ledger technology;

(3) "Governmental entity" means a local governmental entity, including, but not limited to, a municipality, metropolitan government, county, utility district, school district, public building authority, and development district created and existing pursuant to the laws of this state, or an instrumentality of government created by one (1) or more of the named local governmental entities or by an act of the general assembly;

(4) "Non-fungible token" means a non-fungible cryptographic asset on a blockchain that possesses unique identifiers or other metadata that distinguishes the asset from another token or asset in a manner that makes the asset irreplaceable and non-exchangeable for a similar token or asset; and

(5) "Virtual currency" means a digital representation of value that functions as a medium of exchange, a unit of discount, or a store of value, but does not have legal tender status in the United States.

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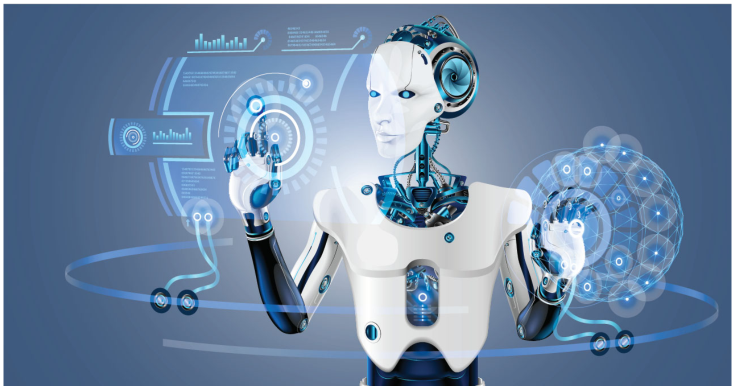
Robotic Process Automation (RPA)



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Robotic Process Automation (RPA)

- Used for routine, repetitive, and manual tasks
- Reduce human errors
- Increase efficiency

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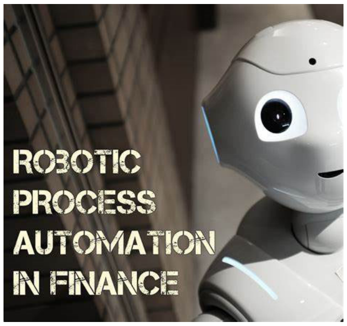
Robotic Process Automation (RPA)

- Potential uses:
  - Data entry
  - Invoice processing
  - Bank reconciliations
  - Set up vendors
  - Create purchase orders
  - Make journal entries
  - Collect data for budget preparation
  - Prepare financial reports
  - Process expense reports
  - Process payroll
  - Process permit applications



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Artificial Intelligence (AI)

ChatGPT
OpenAI

ChatGPT

- 93% percentile for the SAT
- Made a B on Masters of Business Administration final exam
- Passed the CPA exam
- Passed the LSAT in the 88th percentile
- Aced Bar exam – In top 10% of all test takers

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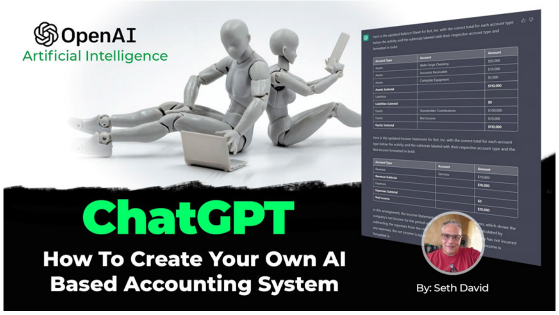
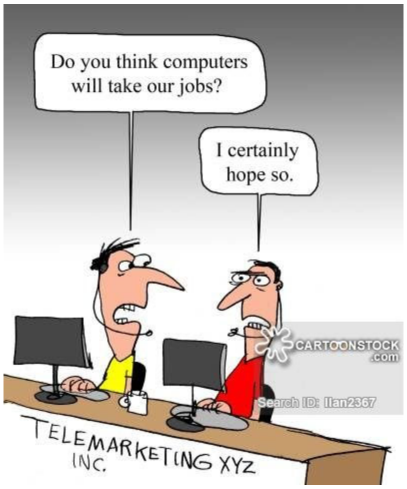
ChatGPT

- Potential Uses:
    - Budgeting
    - Grants
    - Transparency
    - Investments
    - Training
    - Microsoft Office

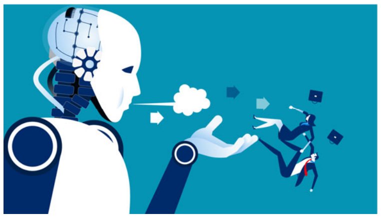

OpenAI
Artificial Intelligence
ChatGPT
How To Create Your Own AI Based Accounting System
By: Seth David

Artificial Intelligence (AI)


Do you think computers will take our jobs?
I certainly hope so.
CARTOONSTOCK .com
Search ID: llan2367
TELEMARKETING XYZ INC.

Artificial Intelligence (AI)

- Jobs in danger:
  - Tech jobs
  - Teachers
  - Customer service agents
  - Accountants and auditors



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Artificial Intelligence (AI)

- Final Thoughts:
  - AI policies
  - Fact check everything
  - AI can hallucinate
  - Proceed with caution!

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Technology Trends Shaping the Future of Local Government

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Mission: To Make Government Work Better

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