Removing the Data Security Barrier Toward Reusing Electronic Devices

Problem:

- 62 million tons of e-waste in 2022, only 22.3% collected and recycled.
- 4.6 million tons of small IT devices discarded in 2022.
- Demand for IT devices is expected to keep growing.
- Average cost of a data breach in 2024 is estimated to be $4.88 million.
- ***50% of IT directors destroy IT devices and one-third hoard them instead of reselling them due to data security concerns.***

Project overview:

We will develop a secure and comprehensive device handling and ***data-wiping process*** to enhance the reuse and upcycling of electronic devices. Additionally, we will create ***training materials*** to raise awareness about data security, the "reduce, reuse, recycle" approach, and e-waste management.

Team:

Dr. Omar Abbaas, dual-title PhD in Industrial Engineering and Operations Research, assistant professor at The University of Texas at San Antonio.

Mr. Oreolorun Titobi, Master of Business Administration, CEO and founder of JustUsedTech.

Key benefits:

- Data security:
  - Create a robust data-wiping process ensuring data protection and ***cybersecurity***.
  - Build trust in the upcycling process through extensive audits and blockchain for tracking and transparency.
- Educational:
  - Create training programs for schools, businesses, and communities on e-waste management and data security.
  - Encourage individuals to be involved in e-waste management.
- Environmental:
  - Reduce e-waste sent to landfills including harmful materials.
  - Lowers greenhouse gas emissions from new device production.
- Economic and social:
  - Circular economy with affordable technology.
  - Access to cost-effective electronics and career opportunities in e-waste management for ***underserved communities***.
  - Precious materials recovery.