LIBRARY IDEAS FOR HARMONY OS

- ❖ **Audio Processing**
  - ▪ Essential Audio Processing Lib.
    - - *Channel Control* : Channel handle (Mono/Stereo; Inplace/Outplace buffering)
    - - *Sound Effects* : 3D Effect (Stereo; Cinema; Concert; Music)
    - - *Volume Control* : Direct user control (Volume; Balance), Loudness maximizer (Compressor), Peak limiter, Automatic volume level, RMS limiter
    - - *Spectral Enhancement* : Bass enhancement, Treble enhancement, Speaker parametric equalizer, User parametric equalizer, Crossover
    - - *Analysis* : Spectrum visualizer
  - ▪ Some useful open source libraries are attached here (1, 2, 3)

- ❖ **Cyber Security**
  - ▪ Container Security Lib.
  - ▪ XDR (extended detection & response) Security Lib.
  - ▪ Cloud Security Lib.
  - ▪ Network Security Lib.
  - ▪ Essential Lib. That deals with
    - - *Zerologon*
    - - *Phishing*
    - - *Ransomware*
    - - *Apache Lo4j*
  - ▪ Robust sensitive information (Confidential Items, passwords, Personal information) keeping system using blockchain technology. Reference

- ❖ **Blockchain**
  - ▪ Essential NFTs Lib.
    - - *Listing NFTs on app/website* : Some useful open source libraries are attached here (1, 2, 3)
    - - *Creating DApp (Decentralized Application)* : Some useful open source libraries are attached here (1, 2, 3)
    - - *Deploying and Minting NFTs* : Some useful open source libraries are attached here (1, 2, 3)

- ❖ **Image Manipulation**
  - ▪ Image restoration Lib.
    - - Useful open source face restoration package <u>attached here.</u>

- ❖ **AI**
  - ▪ Digital Handwriting Lib. Package
    - - For all the devices which uses digital pencil
    - - Similar to AI training model for face recognition, developing a training model that recognizes you digital handwriting and can replace it with your/other beautiful digital handwritings for better note taking

- ❖ **UI/UX**
  - ▪ Design recommendation Engine
    - - User oriented design recommendation based on
      - • *generation* (gen-z, millennial, boomer, etc)
      - • *Culture*
      - • *Gender*
      - • *Region*

- ❖ **Device Oriented**
  - ▪ *Refrigerators & Washing Machine* :
    - - Smart Animation Lib. for touch sensitive background animations. Please go through this youtube <u>video</u> of an open source application for desktop animations.

  - ▪ *Smart Homes* :
    - - Remote access Lib. for cameras, door lock, lightings and various other utilities

  - ▪ *Miscellaneous* :
    - - On Screen manipulations Lib. that adjusts a display's color temperature according to location and time of day. Also offers various other modes for color blindness, movie mode, grayscale, reduced eyestrain, etc.
    - - Edge Computing & Cloud Computing framework lib.