NextMask FFmpeg

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Link de descarga directa de archivo .exe

https://drive.google.com/file/d/1aHrnuscGuMaMYIjTrUyGbyK X8KlKugn/view?usp=sharing

NextMask FFmpeg es una poderosa aplicación de escritorio diseñada para profesionales y entusiastas del multimedia. Aprovechando la biblioteca FFmpeg, la aplicación permite mejorar y procesar archivos de video de manera eficiente a través de una interfaz intuitiva y fácil de usar.

Si tienes alguna consulta o comentario, no dudes en ponerte en contacto a través de: sellocasadenubes@gmail.com.

Descripción

NextMask FFmpeg combina la potencia de FFmpeg con una interfaz sencilla y accesible, permitiendo realizar mejoras y conversiones multimedia de alta calidad. Su diseño optimizado está orientado tanto a profesionales como a usuarios ocasionales, proporcionando una experiencia fluida y eficiente.

Características

Procesamiento de Video:

- Presets de resolución desde 480p hasta 4K (AV1 Ultra).
- Opciones de configuración personalizadas para usuarios avanzados.

Procesamiento de Audio:

- Soporte para múltiples códecs, incluyendo AAC, MP3 y AC3.
- Opción para conservar el audio original.

Salida Personalizable:

 Posibilidad de ajustar nombres, formatos y ubicaciones de los archivos de salida. • Escalado de resoluciones y mantenimiento de relaciones de aspecto.

Registro en Tiempo Real:

 Progreso y registros detallados mostrados durante el procesamiento del archivo.

Interfaz Moderna:

Tema oscuro intuitivo, diseñado para optimizar la experiencia del usuario.

Cómo Usar

1. Seleccionar Archivo Multimedia:

Haz clic en el botón "Seleccionar Video" para escoger el archivo que deseas procesar.

2. Elegir Carpeta de Salida:

Selecciona la carpeta donde deseas guardar los archivos procesados.

3. Configurar Ajustes:

- Selecciona la calidad del video y el códec de audio deseado.
- Personaliza el nombre y formato de archivo.
- Ajusta configuraciones avanzadas como escalado y tasas de cuadros.

4. Iniciar Procesamiento:

Haz clic en "Iniciar Procesamiento" para comenzar el proceso y monitorea el progreso en tiempo real.

5. Cancelar si es Necesario:

Puedes cancelar el proceso en cualquier momento.

Escenario de Ejemplo

Imagina que deseas mejorar un video de baja resolución a calidad HD o convertirlo a un formato moderno que sea compatible con dispositivos actuales, manteniendo una alta fidelidad de audio.

Estructura de la Aplicación

Interfaz de Usuario (UI)

La aplicación ha sido desarrollada con **PyQt5**, ofreciendo una interfaz moderna, fluida y responsive que facilita el uso del programa.

Módulos Principales

1. Motor de Procesamiento:

Integración de **FFmpeg** para tareas de procesamiento de video y audio.

2. Módulo de Registro:

Muestra retroalimentación en tiempo real sobre el progreso de las tareas de procesamiento.

3. Gestor de Configuración:

Permite gestionar las preferencias y configuraciones personalizadas del usuario.

Requisitos del Sistema

- Sistema Operativo: Windows 7 o superior.
- Dependencias:
 - Python 3.7 o superior.
 - PyQt5.
 - FFmpeg (instalado y añadido al PATH del sistema).

Capturas

Desarrollo y Contribución

Créditos

Este software utiliza **FFmpeg** como su motor principal de procesamiento multimedia.

FFmpeg es una de las bibliotecas líderes a nivel mundial en el campo del procesamiento de contenido multimedia. Agradecemos al equipo de FFmpeg por su valiosa contribución al software de código abierto. FFmpeg está licenciado bajo la LGPLv2.1 o posterior.

También queremos agradecer a los desarrolladores de <u>PyQt5</u> por proporcionarnos una rica funcionalidad para crear interfaces gráficas.

Este proyecto también hace uso de las siguientes bibliotecas de Python:

- os: Interacción con el sistema operativo.
- sys: Acceso a parámetros y funciones del sistema.
- **subprocess**: Ejecución de com<mark>andos del s</mark>istema desde Python.
- base64: Codificación y decodificación de datos en base64.
- tempfile: Gestión de archivos temporales.
- PyQt5.QtCore: Funcionalidades clave como hilos y señales.
- PyQt5.QtGui: Manejo de elementos gráficos, incluidos iconos.
- PyQt5.QtWidgets: Construcción de la GUI, incluyendo botones, etiquetas y diálogos.

Contribuciones

¡Las contribuciones son bienvenidas! Si deseas colaborar, sigue estos pasos:

- 1. Haz un **fork** del repositorio.
- 2. Realiza tus modificaciones.
- 3. Envía un **pull request** para que podamos revisar y aceptar tus cambios.

¡Disfruta usando **NextMask FFmpeg**! Tus comentarios son importantes para seguir mejorando este proyecto.

Contribuyendo a NextMask FFmpeg

¡Gracias por considerar contribuir a NextMask FFmpeg! Damos la bienvenida a contribuciones de todos y los alentamos a mejorar y extender el proyecto. Antes de contribuir, por favor lea y siga las pautas a continuación para garantizar una colaboración fluida.

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Cómo Contribuir

Existen varias maneras en las que puedes contribuir a NextMask FFmpeg:

Reportar Problemas

Si encuentras un error o un problema, verifica los problemas existentes para ver si ya ha sido reportado. Si no, crea un nuevo problema. Al reportar un problema, incluye:

- Una descripción clara del problema.
- Pasos para reproducir el problema.
- El entorno en el que ocurre el problema (por ejemplo, sistema operativo, versión de FFmpeg, etc.).
- Capturas de pantalla, registros o mensajes de error (si aplica).

Sugerir Mejoras

Si tienes una idea para mejorar o agregar una funcionalidad a NextMask FFmpeg, abre un nuevo problema y describe claramente tu sugerencia. También puedes comentar en problemas existentes para proporcionar más información o apoyar una característica que te gustaría ver.

Crear Pull Requests

Aceptamos contribuciones en forma de *pull requests* (PRs). Antes de enviar un PR, asegúrate de que:

- Has creado un fork del repositorio y una rama para tus cambios (por ejemplo, feature/tu-característica o bugfix/número-del-problema).
- Tus cambios están basados en la última rama main.
- Tu código sigue las pautas de estilo y formato del proyecto.
- Has escrito pruebas (si aplica) para tus cambios.
- Tu PR incluye una descripción del problema, la solución y cualquier contexto relevante.

Para enviar tu PR, sigue estos pasos:

- 1. Haz un fork del repositorio y clónalo en tu máquina local.
- 2. Crea una nueva rama para tu característica o corrección de errores.
- 3. Realiza tus cambios y confirma los commits con un mensaje claro y conciso.
- 4. Sube tus cambios a tu repositorio fork.
- 5. Abre un pull request a la rama main del repositorio original.

Código de Conducta

Al participar en este proyecto, aceptas cumplir con el Código de Conducta. Este documento detalla nuestras expectativas para el comportamiento en la comunidad y proporciona directrices para reportar violaciones.

Nos esforzamos por crear una comunidad acogedora e inclusiva para todos, independientemente de su experiencia o antecedentes.

Directrices de Desarrollo

Para mantener la calidad y consistencia del proyecto, pedimos que los colaboradores sigan estas directrices:

Estándares de Codificación

- Estilo de Código: Sigue las convenciones de codificación y formato del proyecto. Usa herramientas adecuadas (por ejemplo, linters) para garantizar la consistencia.
- Documentación: Proporciona comentarios y documentación claros y concisos para todas las funciones, métodos y características. Esto ayuda a mantener la legibilidad y utilidad del código.
- Mensajes de Commit: Escribe mensajes de commit claros y concisos en tiempo presente (por ejemplo, "Corrige error en el procesamiento de video"). Usa el siguiente formato:

<tipo>(<ámbito>): <mensaje>

<cuerpo opcional explicando el cambio>

Ejemplo:

feat(filtrado): agrega nuevo filtro de mezcla de máscaras

Tipos de Commit

feat: Una nueva característica.

fix: Una corrección de errores.

docs: Cambios en la documentación.

• style: Mejoras en el estilo del código (por ejemplo, formato, espacios).

refactor: Refactorización de código (sin cambiar funcionalidad).

test: Agregar o modificar pruebas.

 chore: Cambios misceláneos (por ejemplo, herramientas de compilación, dependencias).

Pruebas

Asegúrate de que tus cambios estén correctamente probados. Si estás agregando nuevas características o corrigiendo errores, crea pruebas que verifiquen tus cambios.

Ejecutar Pruebas

Para ejecutar las pruebas:

- 1. Instala las dependencias requeridas:
 - pip install -r requirements.txt
- 2. Ejecuta el conjunto de pruebas:

python -m unittest discover

Asegúrate de que todas las pruebas pasen antes de enviar tu pull request.

Licencia

Al contribuir a NextMask FFmpeg, aceptas que tus contribuciones serán licenciadas bajo la Licencia AGPL-3.0. Por favor, consulta el archivo LICENSE para más detalles.

¡Gracias por contribuir a NextMask FFmpeg! Tus contribuciones ayudan a mejorar este proyecto para todos. Si tienes preguntas o necesitas más ayuda, no dudes en contactarnos.

Este formato es adecuado para ser exportado a un PDF, y se adapta bien a la estructura formal necesaria para documentación de proyectos.

Reportando una Vulnerabilidad

Si descubres una vulnerabilidad de seguridad en NextMask FFmpeg, por favor sigue estos pasos:

No divulgues públicamente la vulnerabilidad.
 Evita compartir detalles en foros públicos o en redes sociales.

Contacta al equipo de desarrollo

Envía un correo electrónico a <u>sellocasadenubes@gmail.com</u> con los siguientes detalles:

- Una descripción detallada de la vulnerabilidad.
- Pasos para reproducir el problema.
- · Cualquier impacto potencial que la vulnerabilidad pueda causar.

Proporciona evidencia de soporte

Adjunta registros, capturas de pantalla u otros archivos que puedan ayudar a validar la vulnerabilidad.

El equipo de desarrollo se compromete a:

- Reconocer la recepción del reporte dentro de las 48 horas.
- Investigar y abordar el problema con prontitud.
- Mantenerte informado sobre el progreso y el estado de la resolución.

Mejores Prácticas de Seguridad

Para ayudar a garantizar la seguridad de tus implementaciones, considera las siguientes prácticas:

- Mantén tu software actualizado. Usa siempre la última versión de NextMask FFmpeg.
- Restringe el acceso. Limita el acceso a archivos sensibles y configuraciones.
- Supervisa regularmente. Revisa los registros en busca de actividad inusual.

• Valida las entradas. Prevén que entradas maliciosas o mal formadas sean procesadas por tu aplicación.

Agradecemos tus esfuerzos para hacer de NextMask FFmpeg una herramienta más segura para todos.

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Codigo de NextMask Ffmpeg

```
mport os
mport sys
mport subprocess
import base64
Import tempfile
From PyQt5.QtCore import QThread, pyqtSignal
From PyQt5.QtGui import QIcon
 rom PyQt5.QtWidgets import (
 QApplication, QVBoxLayout, QHBoxLayout, QPushButton, QLabel,
 QFileDialog, QWidget, QComboBox, QPlainTextEdit, QMessageBox,
 QLineEdit, QCheckBox
 Constantes de estilo
STYLE_SHEET = """
 QWidget {
   background-color: #1e1e1e;
   color: #f1e04d;
   font-family: Arial, sans-serif;
   font-size: 16px;
 QLabel, QComboBox, QLineEdit, QCheckBox
   color: #f1e04d;
   font-size: 16px;
 QPushButton {
   background-color: #ffffff;
   border: 2px solid #e56c00;
  padding: 12px;
   font-size: 18px;
   border-radius: 8px;
   color: #000000;
   transition: all 0.3s ease;
 OPushButton:hover {
   background-color: #f1e04d;
   border: 2px solid #ff7f00;
 QPushButton:pressed {
   background-color: #e56c00;
   color: #ffffff;
 OPlainTextEdit {
   background-color: #252525;
   border: 2px solid #e56c00;
   font-family: Consolas, monospace;
   color: #00ff00;
   font-size: 16px;
   padding: 5px;
   transition: all 0.3s ease;
 QPlainTextEdit:hover {
   border: 2px solid #ff7f00;
```

```
QComboBox, QLineEdit {
    background-color: #333333;
    border: 2px solid #e56c00;
    color: #f1e04d;
    padding: 5px;
VIDEO QUALITY MAP = {
  "Very Low (480p, 30fps, H.264)": [
    "-preset", "medium", "-c:v", "libx264", "-vf", "scale=-1:480", "-crf", "28", "-r",
 30", "-fps_mode", "cfr"
  'Low (720p, 30fps, H.264)": [
    "-preset", "medium", "-c:v", "libx264", "-vf", "scale=-1:720", "-crf", "23", "-r",
 30", "-fps_mode", "cfr"
  "Medium (1080p, 30fps, H.264)": [
  "-preset", "medium", "-c:v", "libx264", "-vf", "scale=-1:1080", "-crf", "23", "-r",
 30", "-fps_mode", "cfr"
  "High (1080p, 60fps, H.265)": [
    "-preset", slow", "-c:v", "libx265", "-vf", "scale=-1:1080", "-crf", "23", "-r", <u>"</u>60",
 -fps_mode", "cfr"
  "Super High (2160p, 60fps, H.265)": [
   -fps mode", "cfr"
  "Ultra (4K, AV1)": [
__"-preset", "slow", "-c:v", "libaom-av1", "-vf", "scale=-1:2160", "-crf", "30", "-r",
 60", "-fps_mode", "cfr"
  "Original Quality (No Compressio<u>n)":</u>
   "-c:v", "copy", "-c:a", "copy"
  "Custom": []
# Mapas de codecs de audio (inalterad<mark>os)</mark>
AUDIO_CODEC_MAP = {

_"AAC (default)": ["-c:a", "aac", "-b:a", "192k"],

_"MP3": ["-c:a", "libmp3lame", "-b:a", "192k"],

_"AC3": ["-c:a", "ac3", "-b:a", "192k"],

"Opus": ["-c:a", "libopus", "-b:a", "96k"],
  "Vorbis": ["-c:a", "libvorbis", "-b:a", "192k"],
"Copy (no change)": ["-c:a", "copy"]
icon_base64 = """
class MediaProcessorThread(QThread):
 log update = pyqtSignal(str)
```

```
finished = pyqtSignal(bool, str)
 def __init__(self, command):
   super().__init__()
   self.command = command
   self.cancelled = False
 def run(self):
  try:
     process = subprocess.Popen(
      self.command, stdout=subprocess.PIPE, stderr=subprocess.STDOUT, text=True
     while True:
       output = process.stdout.readline()
       if not output and process.poll() is not None:
       break
      if output:
        self.log_update.emit(output.strip())
      if self.cancelled:
        process.kill()
        self.finished.emit(False, "Process was cancelled")
     self.finished.emit(True, "Media processed successfully!")
  except Exception as e:
    self.finished.emit(False, f"Error: {e}"
class MediaQualityEnhancer(QWidget):
 def __init__(self):
  super().__init__()
   self.setWindowTitle("NextMask FFmpeg | Dev. Iván Ayub, negroayub97@gmail.com")
  self.setGeometry(100, 100, 720, 490)
  # Icono en base64
   if icon base64:
     icon data = base64.b64decode(icon base64)
    with tempfile.NamedTemporaryFile(detete=False, suffix='.png') as tmp file:
      tmp_file.write(icon_data)
       tmp file path = tmp file.name
     self.setWindowIcon(QIcon(tmp file path))
  self.setStyleSheet(STYLE SHEET)
   self.media path =
   self.output path = ""
   self.output_name = "Done_in_NextMask_FFmpeg"
   self.output_extension = ".mp4"
   self.audio_codec = AUDIO_CODEC_MAP["AAC (default)"]
   self.enable scaling = True # Estado inicial del escalado
   self.maintain aspect ratio = True # Estado inicial de mantener relación de aspecto
  self.init_ui()
 def init_ui(self):
   layout = QVBoxLayout()
```

```
media layout = QVBoxLayout()
self.media_label = QLabel("No media selected")
media button = QPushButton("Select Video")
media_button.clicked.connect(self.select_media)
media layout.addWidget(self.media label)
media layout.addWidget(media button)
layout.addLayout(media layout)
# Output Folder Selection
self.output_label = QLabel("Output Folder: Not selected")
output button = QPushButton("Select Output Folder")
output_button.clicked.connect(self.select_output_folder)
layout.addWidget(self.output label)
layout.addWidget(output button)
# Options
options_layout = QVBoxLayout()
# Output Name
output name layout = QHBoxLayout()
output name layout.addWidget(QLabel("Output Name:")
self.output_name_input = QLineEdit(self.output_name)
output_name_layout.addWidget(self.output_name_input)
options_layout.addLayout(output_name_layout)
# Video Quality
self.quality selector video = QComboBox()
self.quality selector video.addItems(VIDEO QUALITY MAP.keys())
self.quality_selector_video.currentIndexChanged.connect(self.toggle_quality_area)
options_layout.addWidget(QLabel("Select Video Quality:"))
options layout.addWidget(self.quality selector video)
# Opciones de fotogramas
frame_rate_layout = QVBoxLayout()
frame rate layout.addWidget(OLabel("Frame Rate Options:"))
# Checkbox para fotograma constante
self.constant_frame_rate_checkbox = QCheckBox("Enable Constant Frame Rate (CFR)")
self.constant frame rate checkbox.setChecked(False) # Desactivado por defecto
self.constant frame rate checkbox.stateChanged.connect(self.update frame rate options)
frame rate layout.addWidget(self.constant frame rate checkbox)
# Campo de entrada para fotograma máxi<mark>mo</mark>
max frame rate layout = QHBoxLayout()
max_frame_rate_layout.addWidget(QLabel("Max Frame Rate (FPS):"))
self.max_frame_rate_input = QlineEdit()
self.max_frame_rate_input.setPlaceholderText("e.g., 30")
self.max_frame_rate_input.setEnabled(False) # Desactivado por defecto
max_frame_rate_layout.addWidget(self.max_frame_rate_input)
frame rate layout.addLayout(max frame rate layout)
layout.addLayout(frame_rate_layout
self.setLayout(layout)
self.audio_selector = QComboBox()
```

```
self.audio selector.addItems(AUDIO CODEC MAP.keys())
   self.audio_selector.currentIndexChanged.connect(self.update_audio_codec)
   options layout.addWidget(QLabel("Select Audio Codec:"))
   options layout.addWidget(self.audio selector)
   # Enable Scaling Option
   self.scaling checkbox = OCheckBox("Enable Scaling")
   self.scaling checkbox.setChecked(self.enable scaling)
   self.scaling checkbox.stateChanged.connect(self.update scaling option)
   options layout.addWidget(self.scaling checkbox)
   # Maintain Aspect Ratio Option
   self.aspect ratio checkbox = QCheckBox("Maintain Aspect Ratio")
   self.aspect_ratio_checkbox.setChecked(self.maintain_aspect_ratio)
   self.aspect ratio checkbox.stateChanged.connect(self.update aspect ratio option)
   options_layout.addWidget(self.aspect_ratio_checkbox)
   # Custom Command
   self.custom command input = QPlainTextEdit()
   self.custom command input.setPlaceholderText("Enter custom FFmpeg command if 'Custom
is selected.")
   self.custom command input.setMaximumHeight(40)
   self.custom command input.setEnabled(False)
   options_layout.addWidget(self.custom_command_input)
   layout.addLayout(options layout)
   # Console
   self.console = QPlainTextEdit()
   self.console.setReadOnly(True)
   layout.addWidget(self.console)
   # Control Buttons
   button_layout = QHBoxLayout()
   start_button = QPushButton(">START PROCESSING< (Check Console)")</pre>
   start button.clicked.connect(self.start processing)
   button_layout.addWidget(start_button)
   cancel_button = QPushButton("*Cancel Processing*")
   cancel button.clicked.connect(self.cancel processing)
   button layout.addWidget(cancel button)
   layout.addLayout(button layout)
  self.setLayout(layout)
 def toggle quality area(self):
   selected_quality = self.quality_selector_video.currentText()
   self.custom command input.setEnabled(selected quality == "Custom")
 def update_frame_rate_options(self, state)
   """Habilita o deshabilita la opción de CFR.""
   self.constant frame rate enabled = bool(state)
   self.max frame rate input.setEnabled(not self.constant frame rate checkbox.isChecked()
 def update audio codec(self):
  self.audio codec = AUDIO CODEC MAP[self.audio selector.currentText()]
```

```
def select media(self):
 media file, = OFileDialog.getOpenFileName(self, "Select Media File")
  if media file:
   self.media_path = media_file
   self.media label.setText(f"Selected Media: {os.path.basename(media file)}")
def is valid file(self, filepath):
 return os.path.isfile(filepath)
def select_output folder(self):
 folder = QFileDialog.getExistingDirectory(self, "Select Output Folder")
 if folder:
   self.output path = folder
   self.output label.setText(f"Output Folder: \{folder\}")
def is valid directory(self, dirpath):
 return os.path.isdir(dirpath)
def update_scaling_option(self, state):
 self.enable scaling = bool(state)
def update aspect ratio option(self, state):
self.maintain aspect ratio = bool(state)
def start processing(self):
 # Construye el comando de FFmpeg con CFR y FRS máximo
  command = ["ffmpeg", "-y", "-i", self_media_path]
 # Aplica configuración de fotograma constante o máximo
 if self.constant frame rate checkbox.isChecked():
   command += ["-vsync", "cfr"]
 elif self.max_frame_rate_input.text().isdigit():
   command += ["-r", self.max frame rate input.text()]
 if not self.media path:
   QMessageBox.warning(self, "Erron", "Please select a media file!")
   return
  if not self.output path:
   QMessageBox.warning(self, "Error", "Please select an output folder!")
  return
  selected_quality = self.quality_selector_video.currentText()
 quality command = VIDEO QUALITY MAP.get(selected_quality, [])
  if selected_quality == "Custom":
   custom command = self.custom command input.toPlainText().strip().split()
   if not custom command:
     QMessageBox.warning(self, "Error", "Custom command cannot be empty!")
   quality command = custom command
  if not self.enable scaling:
   quality command = [arg for arg in quality command if "scale=" not in arg]
  if not self.maintain aspect ratio:
   quality_command = [
    arg.replace("-1:", "iw:") if "-vf" in arg and "scale" in arg else arg
     for arg in quality command
```

```
output name = self.output name input.text().strip()
   if not output_name:
    QMessageBox.warning(self, "Error", "Output file name cannot be empty!")
    return
   return
   command =
     "ffmpeg",
"-y", "-i", self.media_path,
     *quality_command,
     *self.audio_codec,
    output file
   self.console.appendPlainText(f"Executing command: {' '.join(command)}")
   self.thread = MediaProcessorThread(command)
   self.thread.log update.connect(self.console.appendPlainText)
   self.thread.finished.connect(self.process_finished)
   self.thread.start()
 def process finished(self, success, message):
   if success:
    QMessageBox.information(self, "Success", message)
    QMessageBox.critical(self, "Error", message)
 def cancel processing(self):
  if hasattr(self, 'thread') and self.thread.isRunning():
    self.thread.cancelled = True
    self.thread.wait()
    self.console.appendPlainText('<font color="orange">Process was cancelled by the
user.</font>')
 def save log(self, log text):
   log_file = os.path.join(self.output_path, "process_log.txt")
  _with open(log_file, "a") as f:
   f.write(log_text + "\n")
f name == " main ":
 app = QApplication(sys.argv)
 window = MediaQualityEnhancer()
 window.show()
 sys.exit(app.exec_())
```

Archivo .spec de Pylnstaller

```
# -*- mode: python; coding: utf-8 -*-
a = Analysis(
  ['NextMask FFmpeg.py'],
  pathex=[],
  binaries=[],
  datas=[('ffmpeg.exe', '.'), ('ffplay.exe', '.'), ('ffprobe.exe', '.')],
  hiddenimports=[],
  hookspath=[],
  hooksconfig={},
  runtime hooks=[],
  excludes=[],
  noarchive=True,
  optimize=0,
pyz = PYZ(a.pure)
exe = EXE(
  pyz,
  a.scripts,
  a.binaries,
  a.datas,
  name='NextMask FFmpeg',
  debug=False,
  bootloader ignore signals=False,
  strip=False,
  upx=True.
  upx exclude=[],
  runtime tmpdir=None,
  console=False,
  disable windowed traceback=False,
  argv emulation=False,
  target arch=None,
  codesign identity=None,
  entitlements file=None,
  icon=['NextMask_FFmpeg.ico'],
```