```
std::enable_shared
              from this < GUII >
                     GUII
  + virtual std::unique
      ptr< Commandl > Update
     (std::shared_ptr< CommandFactory
     I > command_factory)=0
  + virtual bool ShouldClose()=0
  + virtual void OpenChoiceDialog
     (DialogMessage dialogMessage,
     std::vector< std::pair< std
     ::string, bool > > &choices)=0
  + virtual void SetPreventInput
     Flag(bool set)=0
  + virtual std::unique
      lock< std::mutex >
     _
LockMutex()=0
  # virtual void Initialize
     (const std::string &windowName, std::shared_ptr< SDFormatParserl
     > sdformat_parser, bool &success)=0
                      GUI
  std::shared ptr< Command
  Factory > command_factory
  std::atomic< bool >
   prevent input flag
  GLFWwindow * window
  ImGuilO * io
  std::shared_ptr< SDFormat
  Parserl > sdformat_parser
  sdf::ElementPtr element
   _to_append_to
  ImVec4 background_colour
  std::mutex gui_mutex
+ GUI(const std::string
   &window_name, std::shared
  _{\rm ptr} < SDFormatParserl > sdformat
   parser, bool &success)
+ void OpenChoiceDialog
  (DialogMessage dialogMessage,
  std::vector< std::pair< std
::string, bool > > &choices)
   override
  void Initialize(const
   std::string &window
_name, std::shared_ptr
  SDFormatParserl > sdformat
   _parser, bool &success) override
  bool ShouldClose()
   override
  std::unique_ptr< Command
  I > Update(std::shared
   _ptr< CommandFactoryI >
command_factory) override
  void SetPreventInputFlag
  (bool set) override
  void DisplaySDFRootElement (std::unique_ptr< Command)
   > &command, std::shared_ptr
  < SDFormatParserl > sdformat
  _parser, std::shared_ptr< CommandFactory
I > command_factory)
  bool SetupNewFrame()
  void DrawCoreFrame
  (std::unique_ptr< CommandI
   > &command, std::shared
  _ptr< CommandFactoryl > command
  _factory)
  void CreateAppendElement
  Dropdown(sdf::ElementPtr
   element, std::unique_ptr
  < Commandl > &command, std
  ::shared_ptr< CommandFactoryI
   > command_factory, int &unique_id)
  void CreateDropdown
  (const std::vector<
   std::string > &items
   const std::vector< std
  ::string > &item descriptions,
   int &selected item, int &unique id)
  std::unique_lock< std
::mutex > LockMutex()
   override
  static void GLFWErrorCallback
  (int error, const char *description)
```

+ ~GUI()