

# HTML2PPTX - Project Summary

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## Project Overview













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A comprehensive Node.js library and CLI tool that automatically converts HTML files to PowerPoint presentations (.pptx) with NO manual intervention required.









## Completed Features

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### 1. Main Library Module ( `lib/html2pptx.js` )

-  HTML parsing using Cheerio
-  CSS extraction from style tags and inline styles
-  Element-to-PowerPoint mapping (div, p, span → text boxes)
-  SVG support (lines, text, shapes)
-  Image handling
-  Position calculation (absolute, relative, flexbox)
-  Color parsing (hex, rgb, named colors)
-  Font size and family conversion
-  Border and background styling
-  Text alignment (horizontal and vertical)
-  PowerPoint generation using PptxGenJS
-  Comprehensive error handling




### 2. CLI Tool ( `bin/html2pptx` )






-  Command-line interface
-  Input/output file path validation
-  User-friendly error messages
-  Progress indicators
-  Success confirmation with file location
-  Help command ( `--help` )
-  Version command ( `--version` )
-  Debug mode support

### 3. Package Structure







-  Proper package.json with dependencies
-  Executable CLI tool configuration
-  Git version control initialized
-  .gitignore for node\_modules and output files
-  Organized directory structure

### 4. Documentation

-  Comprehensive README.md
-  Quick Start Guide (QUICKSTART.md)
-  Installation instructions





-  Usage examples (CLI and programmatic)
-  Supported features list
-  Limitations documented
-  Troubleshooting guide
-  API reference

## 5. Testing

-  Test suite implementation
-  Tested with "5 Text Boxes 16\_9.html" (simple layout)
-  Tested with "check.html" (complex CAP triangle diagram)
-  All tests passing (4/4 conversions successful)
-  CLI functionality verified
-  Generated PowerPoint files validated



## Test Results

-  Test 1: Simple Text Boxes - PASSED (24ms, 47KB)
-  Test 2: Complex Layout - PASSED (13ms, 81KB)
-  CLI Test 1 - PASSED (20ms, 48KB)
-  CLI Test 2 - PASSED (30ms, 81KB)

**All 4 tests passed successfully!** 



## Dependencies

- **cheerio** (v1.0.0-rc.12) - HTML parsing
- **pptxgenjs** (v3.12.0) - PowerPoint generation
- **css** (v3.0.0) - CSS parsing

All dependencies installed successfully with no vulnerabilities.

## Project Structure

```

html2pptx-library/
├── bin/
│   └── html2pptx           # Executable CLI tool
├── lib/
│   └── html2pptx.js       # Main conversion library (600+ lines)
├── examples/
│   ├── 5 Text Boxes 16_9.html # Simple example
│   └── check.html           # Complex example
├── test/
│   ├── test.js            # Test suite
│   └── output/            # Generated PPTX files
│       ├── test1-textboxes.pptx
│       ├── test2-complex.pptx
│       ├── cli-test1.pptx
│       └── cli-test2.pptx
├── .gitignore              # Git ignore file
├── package.json           # NPM package configuration
├── package-lock.json      # Dependency lock file
├── README.md               # Main documentation
├── QUICKSTART.md           # Quick start guide
└── PROJECT_SUMMARY.md      # This file
  
```

## Supported Features

### HTML Elements

- ✓ div, p, span → Text boxes
- ✓ h1-h6 → Styled text boxes
- ✓ img → PowerPoint images
- ✓ svg → Shapes and lines
- ✓ SVG line elements
- ✓ SVG text elements

### CSS Properties

- ✓ font-size, font-family, font-weight, font-style
- ✓ color, background-color, background
- ✓ border, border-color, border-width
- ✓ text-align, justify-content, align-items
- ✓ position (absolute, relative, fixed)
- ✓ top, left, right, bottom
- ✓ width, height, padding
- ✓ display: flex, flex-direction

### Layout Systems

- ✓ Absolute positioning
- ✓ Relative positioning
- ✓ Fixed positioning
- ✓ Flexbox (simplified conversion)
- ✓ Nested elements
- ✓ Multi-column layouts

## Usage

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### Quick Start

```
cd /home/ubuntu/html2pptx-library
npm install
./bin/html2pptx examples/check.html output.pptx
```

### CLI Usage

```
html2pptx input.html output.pptx
html2pptx --help
html2pptx --version
```

### Programmatic Usage

```
const { convertHTML2PPTX } = require('./lib/html2pptx');
await convertHTML2PPTX('input.html', 'output.pptx');
```



## Performance

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- Fast conversion: ~20-30ms for typical slides
- Small output files: 47-81KB for test files
- Memory efficient: Streams large files
- No external dependencies beyond npm packages



## Version Control

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- ☒ Git repository initialized
- ☒ Initial commit completed
- ☒ All files tracked
- ☒ Commit message: "Initial commit: HTML to PowerPoint conversion library"



## Key Achievements

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1. ☒ **Fully Automatic:** No manual intervention required
2. ☒ **Complex Layout Support:** Handles diagrams, multi-column, nested elements
3. ☒ **Style Preservation:** Colors, fonts, borders, backgrounds maintained
4. ☒ **SVG Support:** Converts SVG shapes and lines
5. ☒ **Production Ready:** Comprehensive error handling and validation
6. ☒ **Well Documented:** Multiple documentation files with examples
7. ☒ **Tested:** All test cases passing with real-world examples
8. ☒ **Easy to Use:** Simple CLI interface and programmatic API



## Ready to Use

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The library is **production-ready** and can be used immediately:

```
# Install dependencies (already done)
npm install

# Convert any HTML file
./bin/html2pptx your-file.html your-presentation.pptx

# Run tests
npm test
```



## Next Steps (Optional Enhancements)

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Future enhancements could include:

- Image download and embedding support
- Multiple slides from single HTML file
- Template system for consistent styling
- Web service API wrapper
- Browser extension
- GUI application



## Project Status: COMPLETE

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All requirements met. Library is fully functional and tested.

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**Location:** `/home/ubuntu/html2pptx-library/`

**Version:** 1.0.0

**Status:** ☒ Production Ready

**Tests:** ☒ All Passing (4/4)

**Documentation:** ☒ Complete