Chapters:

Introduction

State of Computer Science Higher Education

Algorithm Animation

Compilation to JavaScript

Conclusion

Introduction

Statement of why I took on this project

Wanting to work on existing open source project

Wanted to make something that would get use

Need of tools for educators

Overview of the chapters to follow

State of Computer Science Higher Education (refer to materials from last semester)

Problems in education currently

Shortage of professors/demand for more faculty

Not enough people graduating with PhDs going into education

Demand for undergrad and grad CS students from private and public sector

Necessity of more tools for professors

This would allow addressing the problem more immediately

Has it downfalls, doesn’t give students more professors

Explanation of existing JavaPPTX Package

Java to PPTX

Should save time animating

More effective at conveying concepts to students

Statement of my extension

Why is it needed

Accessibility to students without PP

Usage on all devices

Importantly its native usage (no apps needed)

How is it different

Output of HTML, CSS and JS

Algorithm Animation

Present a history of algorithm animation

Current State (more on JavaPPTX)

Compilation to JavaScript

Explanation of the feature set of the program

No additional logic on the users part

Makes PP and JS that are identical

The output can be made into a standalone website easily or can be integrated into existing ones

Explain the internal logic of the compilation

Tracing the logic

Writing of the JS files

Boilerplate JS

Literature search

Algorithmn animaton

Marc Brown (balsa in the 80s)

Really set it in the history of algorhtimic animation

Find what refrences the brown paper

Google Scholar

SIGCSE

Using other technologies to do lectures, PDFs and Excel

These are old papers that may not have much traction

Also put in context of using more online tools to support faculty

Statement of Work

How do I make something very visual appear well on a page?

E.x. optical illusions

Future Directions