

Software Requirements Specification for “Beam Bending”

Examining a beam bending under load.

Jason Balaci

McMaster University

Jan. 26th, 2023

Table of Contents

1 Overview

2 Drasil

3 Conclusion

Table of Contents

1 Overview

2 Drasil

3 Conclusion

- ➊ Background: Drasil
- ➋ 4 Research Areas:
 - ➊ Structuring theories
 - ➋ Restricting mathematical expression terminology to appropriate contexts
 - ➌ Well-typedness of mathematical expressions
 - ➍ An extensible database for remembering everything

Table of Contents

1 Overview

2 Drasil

3 Conclusion

What is Drasil? How does it work?

“Generate All The Things!”



- 1 Software generation suite for “well-understood” domains
- 2 De-duplicating and capturing knowledge across software artifacts
- 3 Uses a Software Requirements Specification (SRS) template to decompose scientific problems and generate software

Using SRS components:

- ① Symbols (inputs, outputs, and everything in-between)
- ② Problem description and goals
- ③ Assumptions
- ④ Abstract theories
- ⑤ Concrete theories
- ⑥ ...

Table of Contents

1 Overview

2 Drasil

3 Conclusion

Concluding Remarks & Takeaways

To sum up, we...

- ① structured theories,
- ② restricted expressions by context,
- ③ added type-checking to expressions,
- ④ and prototyped an extensible chunk database structure.