



# Summer Fellowship Report

On

**Creation of Spoken tutorials**

Submitted by

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Under the guidance of

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# Acknowledgment

I, at this moment, take the opportunity to express my profound gratitude towards all those who were instrumental in the successful completion of my Internship at FOSSEE Team, IIT BOMBAY. I would like to whole-heartedly thank my internship guide, Ms. Rashmi Patankar, for her constant guidance and motivation. In addition, I would like to thank all the people at FOSSEE Team, IIT BOMBAY, who have helped me develop as a professional. It would not have been possible without the kind support and help of many individuals and organizations. I want to extend my sincere thanks to all of them. I would also like to express my gratitude towards my parents and members of NIT Warangal, for their kind co-operation and encouragement, which helped me complete this Internship.

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# Chapter 1

## Introduction

DWSIM (Design, Win, and Simulate) is an open-source chemical process simulation software that empowers engineers and researchers to model and analyze complex chemical processes. It offers a user-friendly interface and a wide range of tools for designing and simulating chemical processes, making it a valuable resource for industries such as chemical engineering, pharmaceuticals, and energy. DWSIM allows users to create detailed process models, perform thermodynamic and kinetic simulations, and optimize processes for efficiency and cost-effectiveness.

Its flexibility, extensive library of components, and compatibility with various operating systems make it a versatile choice for professionals and students in the field of chemical engineering.

# Chapter 2

## Project Brief

I was tasked with modification of some of the existing videos available on FOSSEE Website on DWSIM software. It was my first hand Experience with LaTeX and DWSIM. DWSIM (Design, Win, and Simulate) is an open-source chemical process simulation software that empowers engineers and researchers to model and analyze complex chemical processes.

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So, I had to learn DWSIM to get acquainted with the software. I did the first modification on the Tutorial titled “PFR”. I was advised all the changes by my Mentor. The changes were satisfactorily implemented in the script file. I used the G-docs for the script Writing Editing. The Next tutorial I worked on was “CSTR”. It was the same exercise as I had performed with the “PFR” tutorial. I made the changes to the script as advised by my Mentor.

The final Assignment I was assigned was to work on a completely new Tutorial on “Pumps”. I made it’s script completely from scratch. Apart from the scripts. I also worked on making the Presentatons of the above Tutorials using Beamer.

# Chapter 3

## Conclusion

During my Internship, I had the opportunity to delve into two powerful tools that significantly upskilled me in the realms of chemical engineering and document preparation: DWSIM and LaTeX.

DWSIM, a comprehensive chemical process simulation software, played a pivotal role in my learning journey. It enabled me to create intricate models of chemical processes, allowing me to gain a deeper understanding of real-world applications. I learned to input process parameters, perform simulations, and analyze the results. This practical experience was invaluable, as it bridged the gap between theoretical knowledge and hands-on application. I was able to explore various scenarios, optimize processes, and troubleshoot issues, all of which are critical skills in the field of chemical engineering.

Additionally, I delved into LaTeX, a typesetting system widely used for creating professional and high-quality documents, especially in scientific and technical fields. LaTeX challenged me to structure documents logically, format equations with precision, and manage references seamlessly. The proficiency I gained in LaTeX not only enhanced the quality of my reports and presentations during the internship but also equipped me with a valuable tool for future academic and professional endeavors.

Overall, my experience with DWSIM and LaTeX during this internship has been transformative. These skills have not only bolstered my confidence but have also made me a more competent and versatile chemical engineer. I am now better prepared to tackle complex real-world challenges and communicate my findings effectively, which are essential attributes for success in the field. This internship has truly been a stepping stone towards my professional growth and development.

# Chapter 4

## References

- <https://spoken-tutorial.org/>
- <https://www.overleaf.com/project>
- <https://www.wikipedia.org/>

**Thank You**