Overleaf is an Online LaTeX Document Creation Platform for a Scientific Paper

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Abstract: Overleaf is a free, collaborative, online LaTeX document creation platform for university students, staff, and faculty. LaTeX is a document preparation system that uses a markup language to format and display information and print it out on paper in the form of a scientific paper pdf e-book. Overleaf is a collaborative cloud-based LaTeX editor used to write, edit, publish scientific documents to a common format for both a scientific journal or an international conference proceedings book with international scientific works. It can be upgraded when you need to organize an international conference or support an international journal publication. Get the best Overleaf experience with flexible plans for everyone—from students, lecturers and individual researchers, to large businesses and universities. For small teams and departments that want to write and collaborate easily in LaTeX. For teams and organizations that want streamlined logins and our strongest cloud security. For large organizations and facilities that need site-wide access or an on-premises solution. With upgrade costs ranging from free to $7.45, $16.60, $33.25 per month, billed annually.

Keywords: Overleaf; LaTeX; Style; Styling; Magazine Publishing.

I. INTRODUCTION

LaTeX is a software system use command for input text text for typesetting documents. LaTeX markup describes the content and layout of a document, in contrast to the formatted text in WYSIWYG word processors such as Google Docs, LibreOffice Writer, and Microsoft Word. The writer (programmer - LaTeX coder) uses markup conventions to define the general structure of a document, to style text throughout the document (such as bold and italic, writing mathematical formulas), and to add citations and cross-references. A TeX distribution such as TeX Live or MiKTeX is used to create output files (such as PDF or DVI) suitable for print or digital distribution, without the different layout techniques of each writer making it difficult to generalize across different prepress systems.

II. METHODOLOGY

Study the tutorial documents from overleaf.com, ijisrt.com, LaTeX software system on how to write a scientific article with input data being plain text without formatting and use LaTeX commands to layout the scientific article according to the standards of scientific journal publishers. Practical research methods are methods applied directly to research problems in practice to understand the nature and laws of those problems, including scientific experimental methods applied to a number of research problems that need to impact on the objects to direct them to develop or operate according to the set expected goals.

III. RESULTS AND DISCUSSION

A scientific article is an intellectual product published from systematic scientific research from the process of studying many scientific documents combined with experiments. After each study, the scientist will have to make a discovery from the research method of synthesis, comparison, expert opinion survey, and statistics. These findings are summarized into an article and published in a specialized scientific journal with scientific criticism.

The example below shows the input of LaTeX using the amsmath package and the corresponding output from the system for writing mathematical formulas:

Table 1: Result

Input	Output
\documentclass{article} \usepackage{amsmath} \title{\LaTeX} \begin{document}　\maketitle \LaTeX{ }　\begin{align} E_0 &= mc^2 \\ E &= \frac{mc^2}{\sqrt{1-\frac{v^2}{c^2}}} \end{align} \end{document}	$E_0 = mc^2$ $\quad(1)$ $E = \dfrac{mc^2}{\sqrt{1-\frac{v^2}{c^2}}}$ $\quad(2)$
\documentclass[12pt, letterpaper]{article} \begin{document} \begin{math} E=mc^2 \end{math} is typeset in a paragraph using inline math mode---as is $E=mc^2$, and so too is \(E=mc^2\). \end{document}	$E = mc^2$ is typeset in a paragraph using inline math mode---as is $E = mc^2$ and so too is $E = mc^2$

Supports typesetting of mathematical formulas, illustrations in papers, tables and extremely complex technical content for physical sciences; utilities for annotation, cross-referencing and managing reference lists with open source page layout control; easily create complex document components or synchronize lists such as indexes, glossaries, tables of contents, lists of images; highly customizable to create documents on demand due to the inherent programmability and extensibility through thousands of free add-on packages made on the software for free download, installation and use or even free online use.
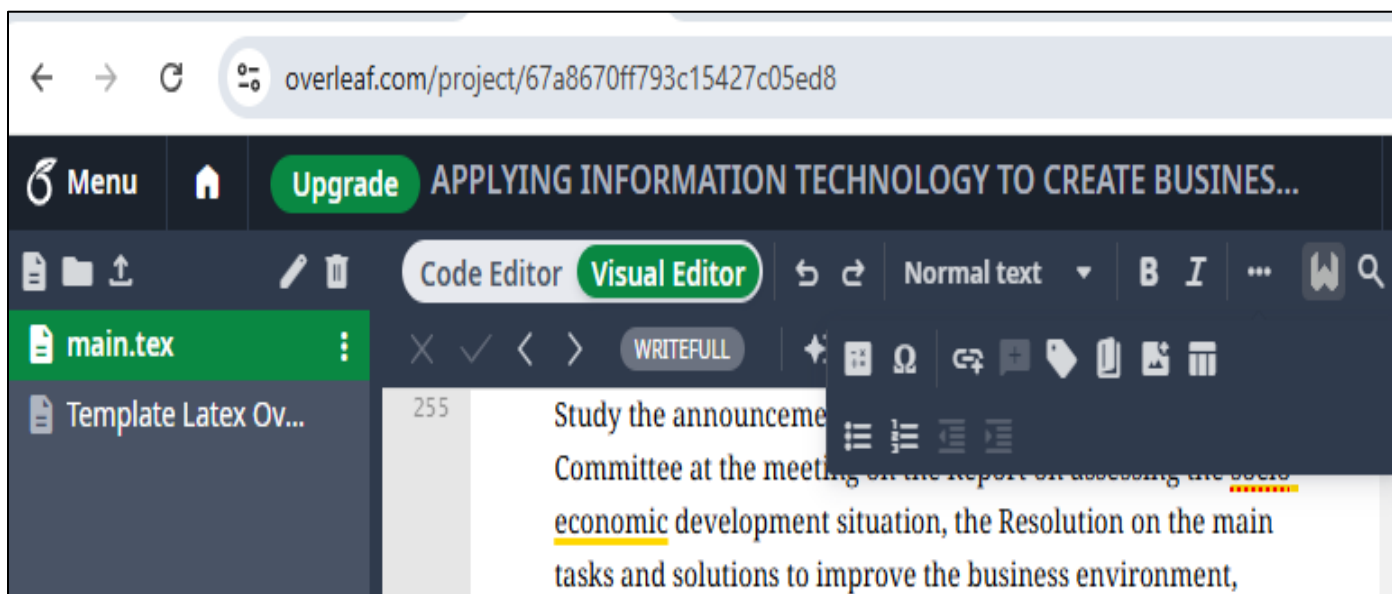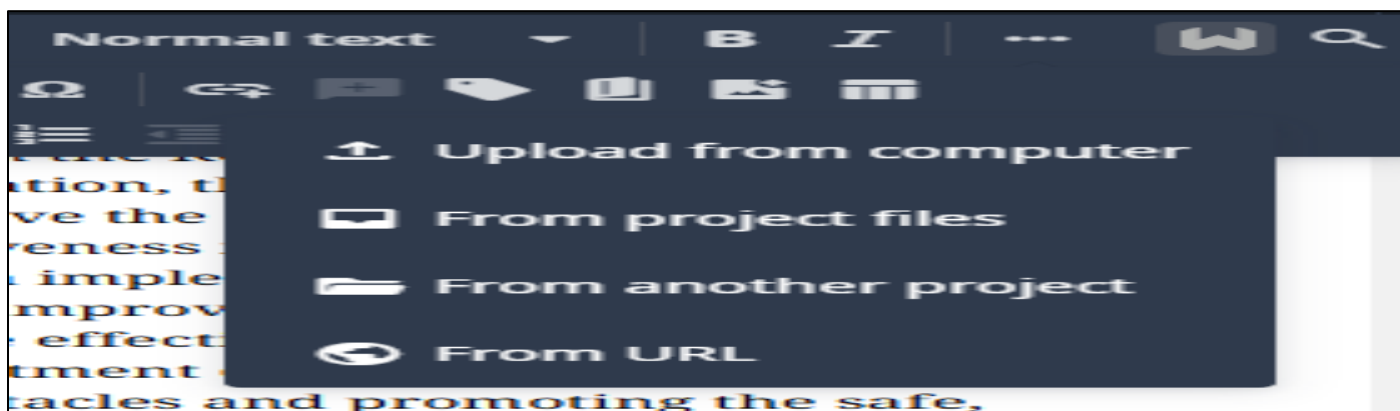

Fig 1: Insert Image in overleaf.com

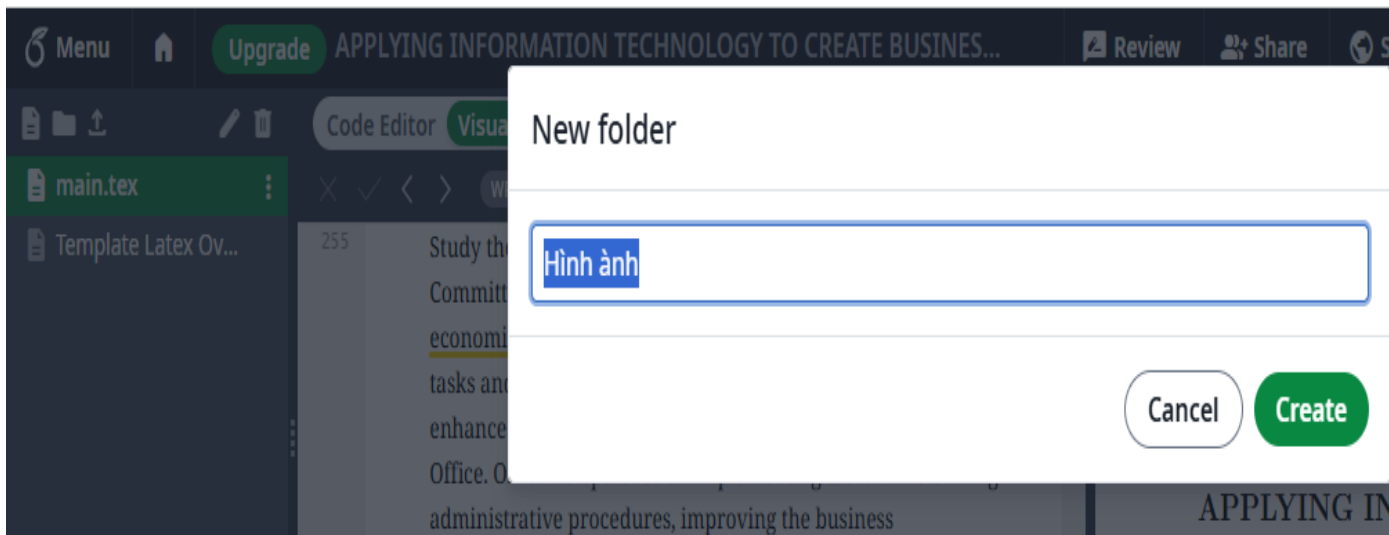Fig 2: Select the Source where the Image is Located to Insert

Fig 3: Create a Folder to Contain Images Inserted into Scientific Articles

Fig 4: Select Specific Images and Table of Contents on overleaf.com System

Fig 5: Image after Inserting into Scientific Article

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don't do it, do it and implement it, produce specific products,
achieve quantifiable results;
\begin{figure}
    \centering
    \includegraphics[width=0.25\linewidth]{Hình ảnh chèn/HINH 3x4
    TRINH QUANG MINH.JPG}
    \caption{Enter Caption}
    \label{fig:enter-label}
\end{figure}
%-------------------------------------------------------------
\section{References}
\textbf{}

[1].    thuvienphapluat.vn. (2025, 02 09). View more legal
documents, official dispatches, and online judgments;. Retrieved
from LAW LIBRARY: https://thuv-
ienphapluat.vn
\textbf{}
```

Fig 6: Code LaTeX of Insert Picture

- \documentclass{article}
- **\usepackage{graphicx}** %LaTeX package to import graphics
- \graphicspath{{images/}} %configuring the graphicx package
- \begin{figure}
- \centering
- **\includegraphics[width=0.25\linewidth]{**Hình ành chèn/HINH 3x4 TRINH QUANG MINH.JPG**}**
- \caption{**Enter Caption**}
- \label{fig:enter-label}
- \end{figure}
- %---
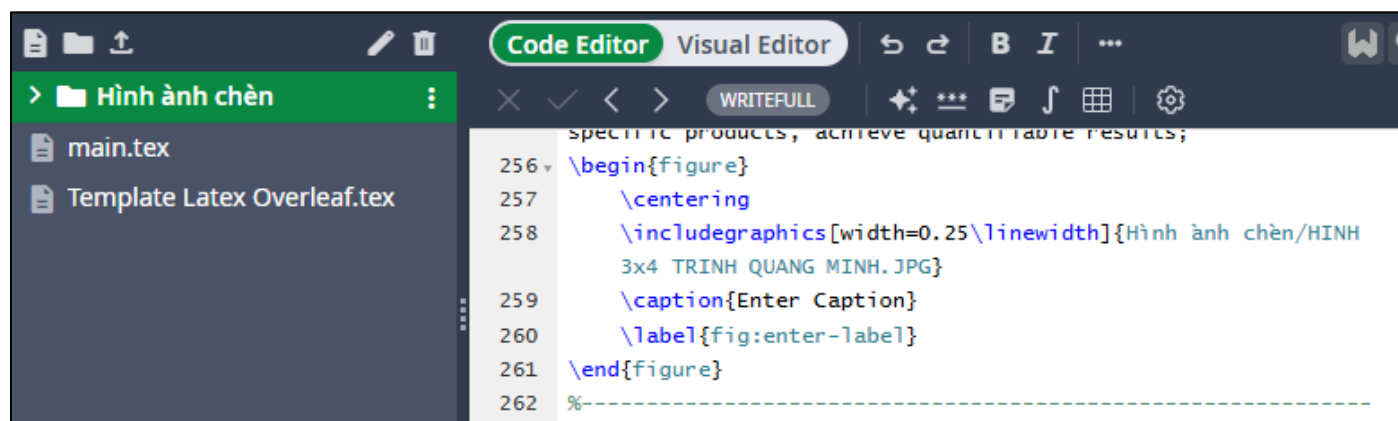- \section{References}
- \textbf{}

Fig 7: Folder "Hinh anh chen/HINH 3x4 TRINH QUANG MINH.JPG"

➢ *Using packages in a scientific paper*

- \documentclass[runningheads]{llncs}
- \usepackage[utf8]{inputenc}
- \usepackage{hyperref}
- **\usepackage{graphicx}**
- \usepackage{amsmath,amssymb,amsfonts}
- \usepackage[T1]{fontenc}
- \usepackage{textcomp}
- \usepackage{lmodern}
- %\usepackage{algorithmic}
- \usepackage{xcolor}
- %\usepackage[sorting=none]{biblatex}
- % \usepackage[ruled]{algorithm2e}
- % \usepackage[utf8x]{inputenc}
- \usepackage{subcaption}
- \usepackage{multirow}
- \usepackage{bbding}

- \usepackage{algpseudocode}
- \usepackage{algorithm}
- \algnewcommand\algorithmicforeach{\textbf{for each}}
- \algdef{S}[FOR]{ForEach}[1]{\algorithmicforeach\ #1\ \algorithmicdo}

➢ *Title and author of scientific article*

- \begin{document}
- %
- \title{APPLYING INFORMATION TECHNOLOGY TO CREATE BUSINESS ENVIRONMENT, GREEN ECONOMIC TRANSFORMATION AND SUSTAINABLE DEVELOPMENT OF REGIONS AND LOCALITIES}
- %
- \titlerunning{INTERNATIONAL SCIENTIFIC CONFERENCE}
- % If the paper title is too long for the running head, you can set
- % an abbreviated paper title here
- %
- \author{Trinh Quang Minh \Envelope \inst{1} \and
- Trinh Hue\inst{1} \and
- Ngo Thi Lan\inst{1}\and
- Bui Xuan Tung\inst{1}\and
- Nguyen Chi Cuong\inst{1}\and
- Lam Tan Phuong\inst{1}\and
- Tran Minh Tan\inst{1}\and
- %Tran Minh Tan\inst{2}\and
- Nguyen Minh Hieu\inst{1} }
- \authorrunning{[tqminh@tdu.edu.vn]}
- \institute{Tay Do University, Can Tho, Vietnam \\
- Email: tqminh@tdu.edu.vn}
- %
- \maketitle   % typeset the header of the contribution%
- The Abstract and keywords of a scientific paper are usually an average of 5 words:
- \begin{abstract}
- Creating an open, favorable, equal business environment, transforming the green economy and developing sustainable regions for businesses and entrepreneurs, especially building a socialist-oriented market economy institution, fair and healthy competition among economic sectors. The Government always closely follows and promptly institutionalizes the Party's policies, contributes to building State policies and laws, builds a fair and healthy business environment for businesses and entrepreneurs to develop; together bring the country to a new stage of development in the era of the 4.0 industrial revolution, achieving the goal set by the 13th National Congress of the Communist Party of Vietnam to build a rich and strong Vietnam. Solidarity and unity among businesses and entrepreneurs, together develop, progress, contribute to the country and the people. \url
- \keywords{green logistics \and green economy \and business environment \and green economic transition \and regional sustainable development }

- \end{abstract}

➢ *Introduction of the scientific paper and LaTeX code:*

- \section{Introduction}
- % \textbf {THAM KHAO CAU TRUC BAI BAO}:
- %   \url{http://isi-journal.vn/cau-truc-cua-mot-bai-bao-khoa-hoc/}
- \textbf{ }
- Creating a favorable business environment for businesses and entrepreneurs: Celebrating October 13, 2024, Vietnam Entrepreneurs' Day, after 40 years of innovation, celebrating 20 years of entrepreneurs, the team of businesses, entrepreneurs contributing to the integration process, ensuring national defense and security. Need policies to support debt deferral, debt extension, debt forgiveness, taxes, banking policies to support interest rates to help and support small and medium enterprises to overcome difficulties, Resolution 02/NQ-CP of the Government to support people and individual business households. Resolution 02/NQ-CP on key tasks and solutions to improve the business environment, enhance national competitiveness dated January 5, 2024 issued by the Government. Program to create the best conditions to help businesses develop, medium and long-term loans for sustainable development. Developing sustainable agriculture in Vietnam and sustainable poverty reduction program. Supply disruption, affected by storm yagi, raw material prices increase.
- %-------chen bang---

➢ *LaTeX code to insert Table in Overleaf:*

- %-------chen bang---
- \begin{table}[]
- \centering
- \caption{Number of newly established enterprises (NEE) by 2023.}\label{tab:dulieu}
- \begin{tabular}{|l|l|}
- \hline
- \multicolumn{1}{|c|}{Name of statistical research topic} & \multicolumn{1}{c|}{Statistics}
- \\
- \hline a) Number of NEE within 20 years (2004-2023): & 1.88 million.   \\
- \hline
- b) Number of NEE in 2023 compared to 2004:
- &
- %increased by
- %\newline
- %\hfill\break
- %about
- 4.3 times.
- \\
- \hline
- c) Number of NEE in the first 9 months of 2024: & 121,000
- \\
- \hline

- d) Estimated number of NEE in 2024:   &
  121,000 enterprises
- \\
- \hline
- e) Density of operating enterprises: & about 8.4 times
- \\

- \hline
- \end{tabular}
- \end{table}
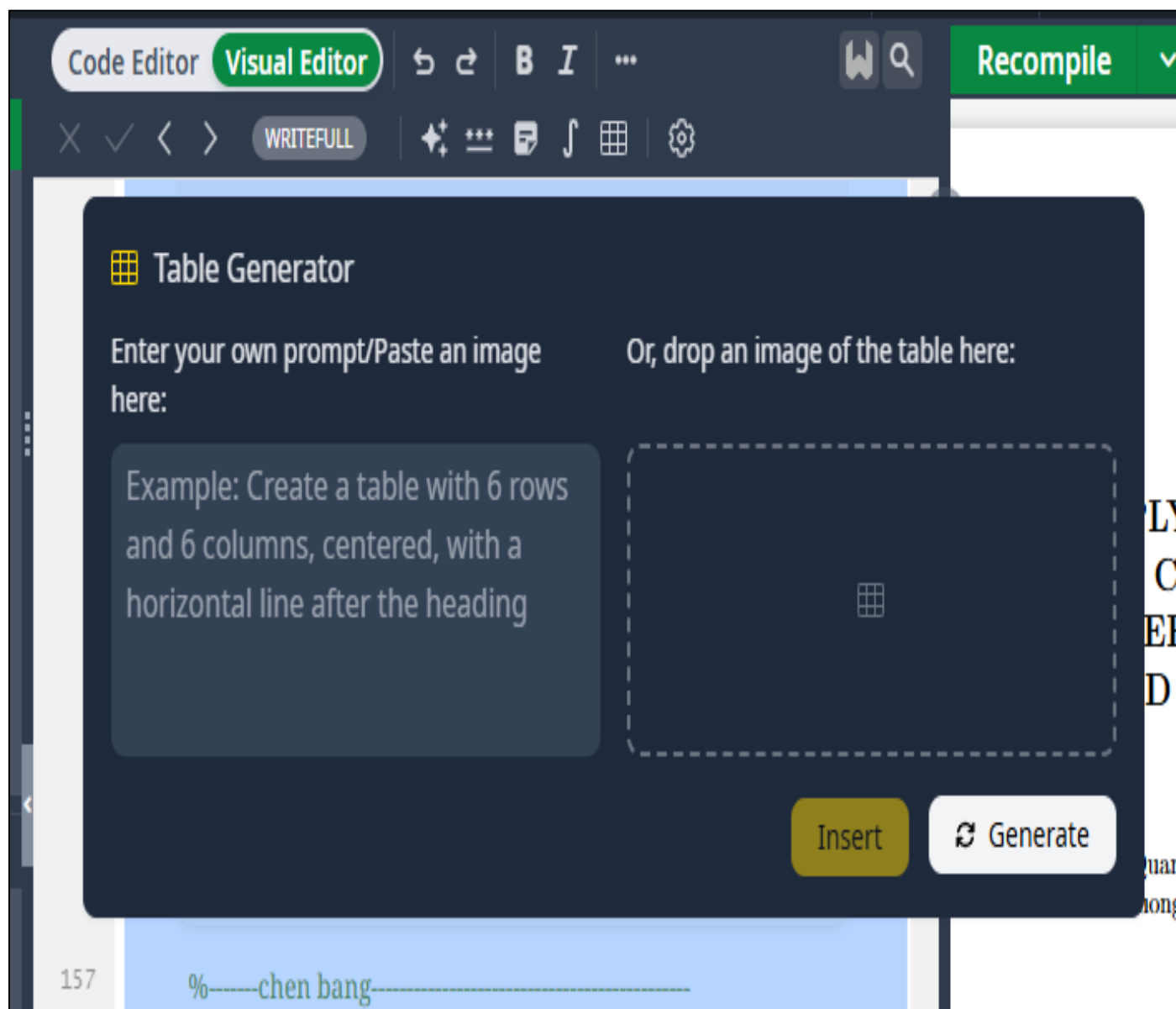- %-------chen bang---
- \textbf{ }

Fig 8: LaTeX code to insert Table in Overleaf by clicking drag and drop to insert code.

Speed up your writing with a series of AI features! Generate code with TeXGPT or the Table/Equation Generators, rewrite, explain, or summarize text with the Context Options, and complete your sentences with Supercomplete. Read more here. Note that these features leverage third-party services including GPT. Anonymous data (text entered and received, not linked to your email address) might be collected by these providers for quality control. By using these features, you agree to these terms. When the language check is applied to your project, the language check model does not learn from your text. By default, the language check uses Writefull's language model to check your text, and

Writefull never stores your text, nor does it use your text or interaction to train its proprietary AI models. If you choose to use the OpenAI's GPT model, your text may be temporarily stored by this third-party service provider, but your text is never used to train any AI.

The level of AI support you use is entirely up to you, you can use Writefull for a language revision only, or use the text rewriting/rephrasing features. Choose what feels right to you, and make sure to follow your institution's or publisher's policy on responsible use of AI technology.
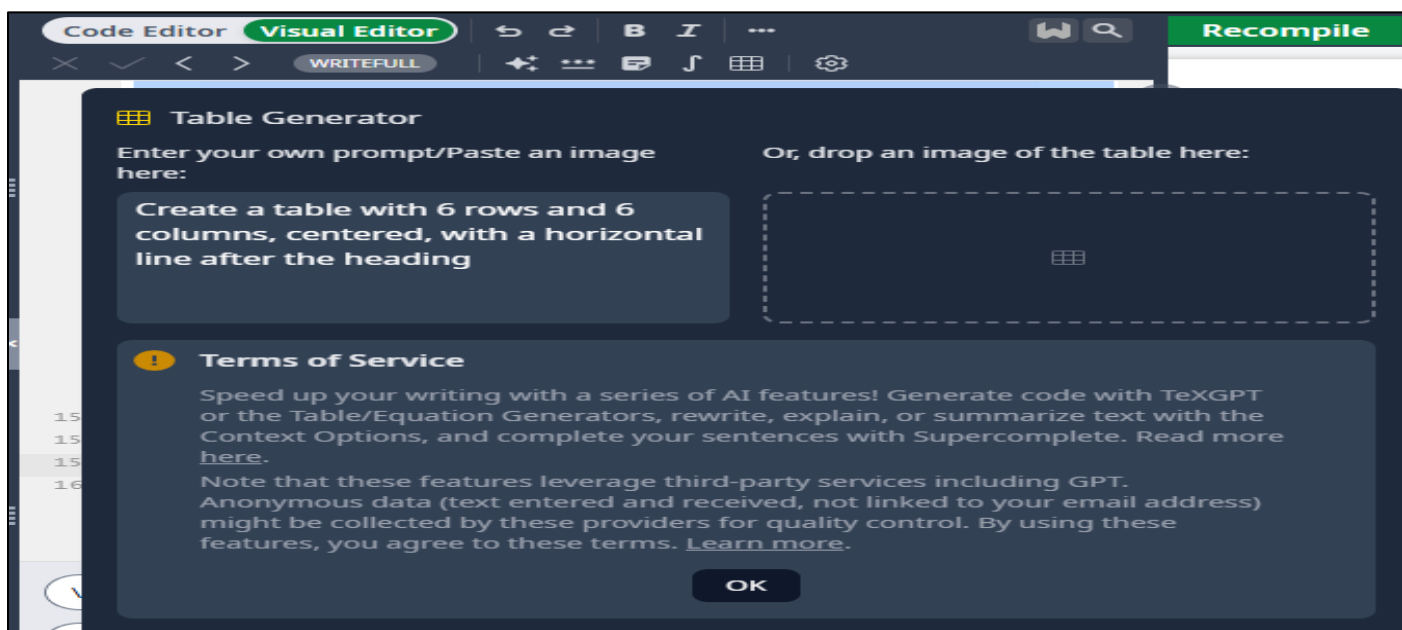
Fig 9: Speed up your Writing with a Series of AI Features! Generate Code with TeXGPT
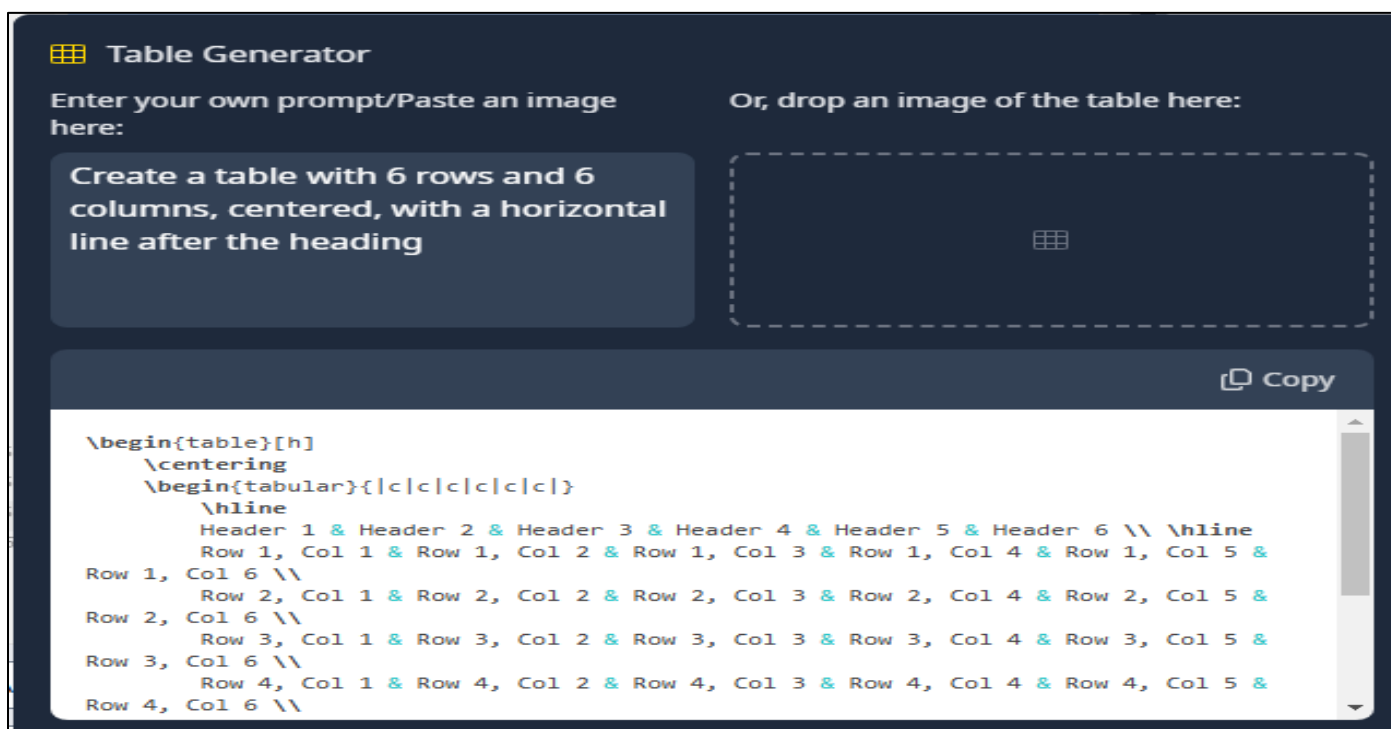

Fig 10: Table Generator

- LaTeX code to insert Table in Overleaf:
- \begin{table}[h]
- \centering
- \begin{tabular}{|c|c|c|c|c|c|}
- \hline
- Header 1 & Header 2 & Header 3 & Header 4 & Header 5 & Header 6 \\ \hline
- %--6 Columns, 6 Rows with Create Table Statement---
- Row 1, Col 1 & Row 1, Col 2 & Row 1, Col 3 & Row 1, Col 4 & Row 1, Col 5 & Row 1, Col 6 \\
- Row 2, Col 1 & Row 2, Col 2 & Row 2, Col 3 & Row 2, Col 4 & Row 2, Col 5 & Row 2, Col 6 \\
- Row 3, Col 1 & Row 3, Col 2 & Row 3, Col 3 & Row 3, Col 4 & Row 3, Col 5 & Row 3, Col 6 \\
- Row 4, Col 1 & Row 4, Col 2 & Row 4, Col 3 & Row 4, Col 4 & Row 4, Col 5 & Row 4, Col 6 \\
- Row 5, Col 1 & Row 5, Col 2 & Row 5, Col 3 & Row 5, Col 4 & Row 5, Col 5 & Row 5, Col 6 \\
- Row 6, Col 1 & Row 6, Col 2 & Row 6, Col 3 & Row 6, Col 4 & Row 6, Col 5 & Row 6, Col 6 \\ \hline
- \end{tabular}
- \caption{Placeholder caption for 6x6 table}
- \label{tab:placeholder_label}
- \end{table}

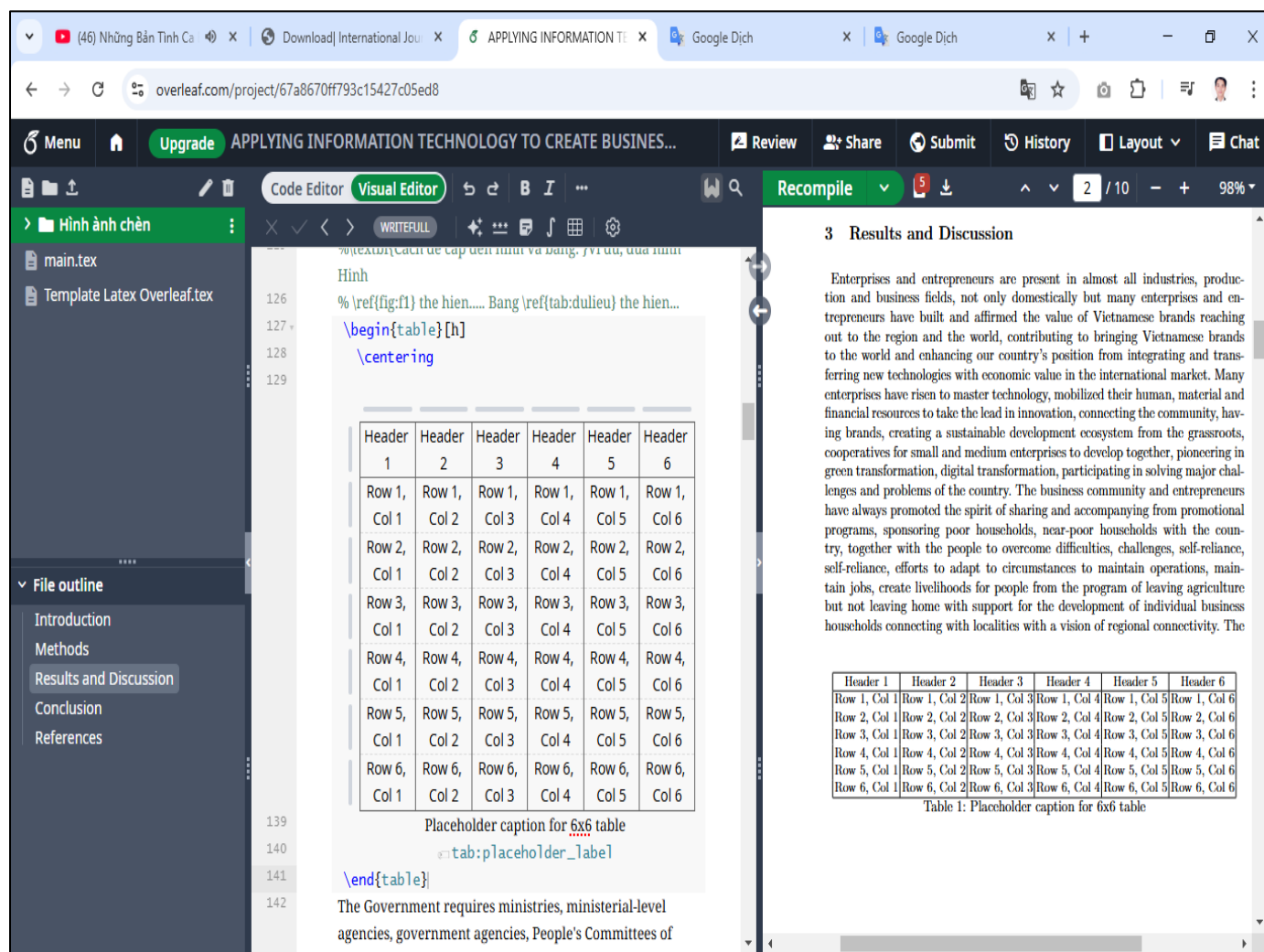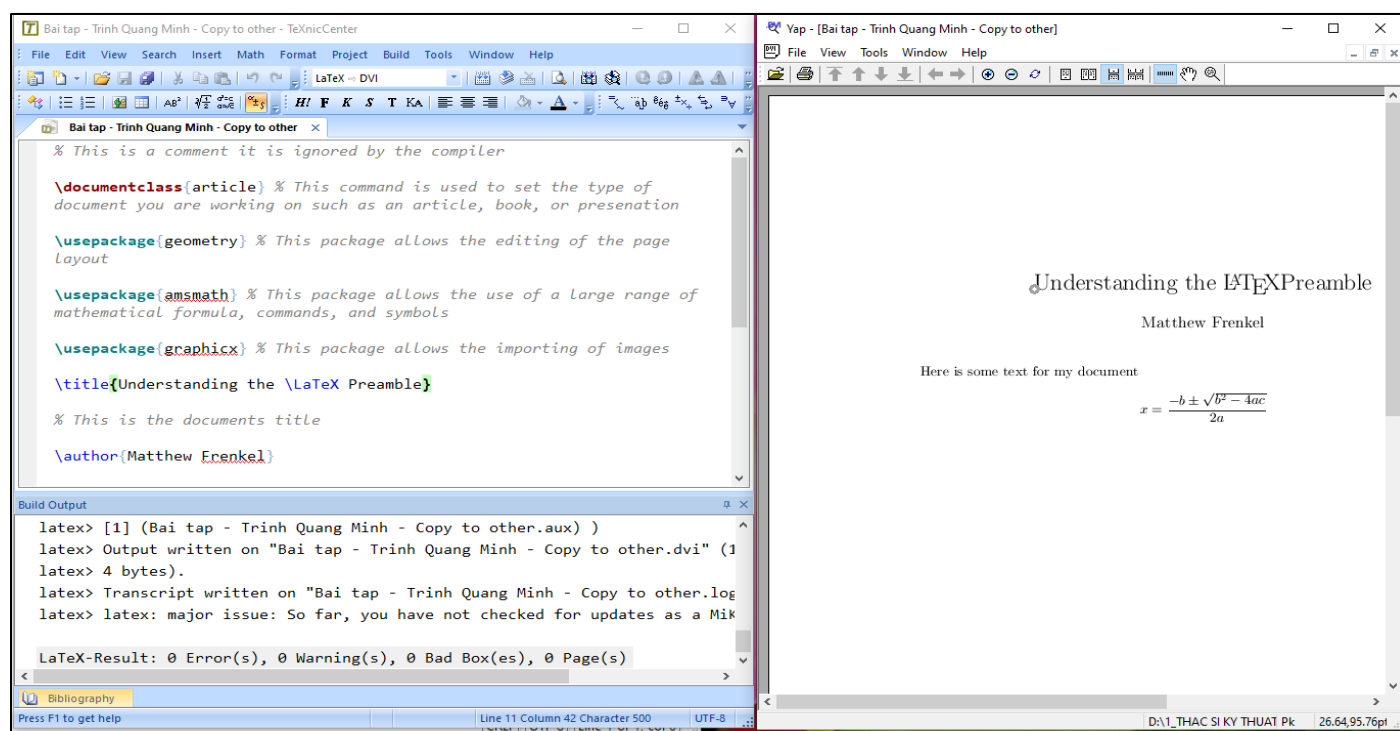Fig 11: Full Screen Capture https://www.overleaf.com and Insert Table in Scientific Paper

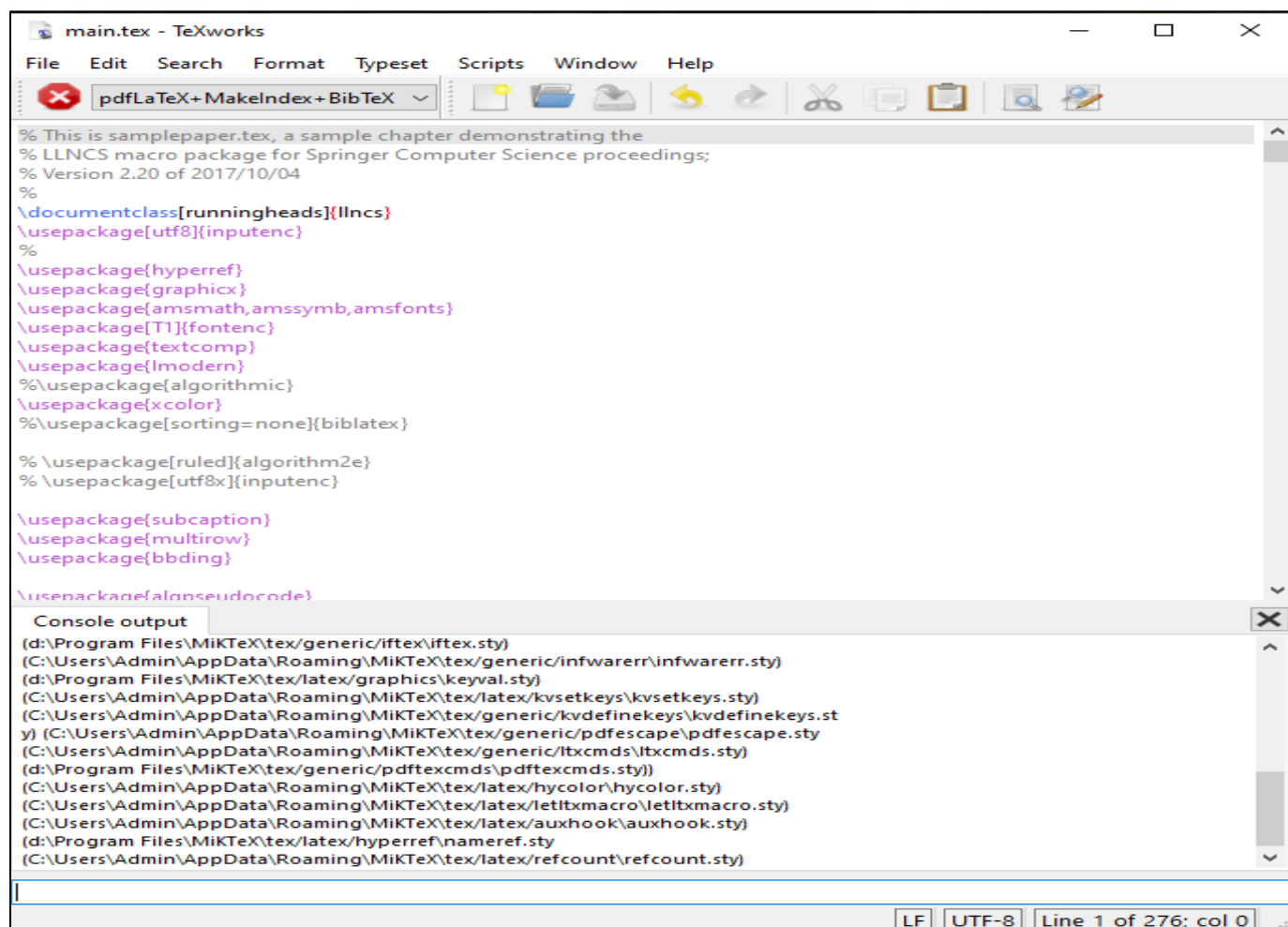Fig 12: TeXnic Center Software and Output
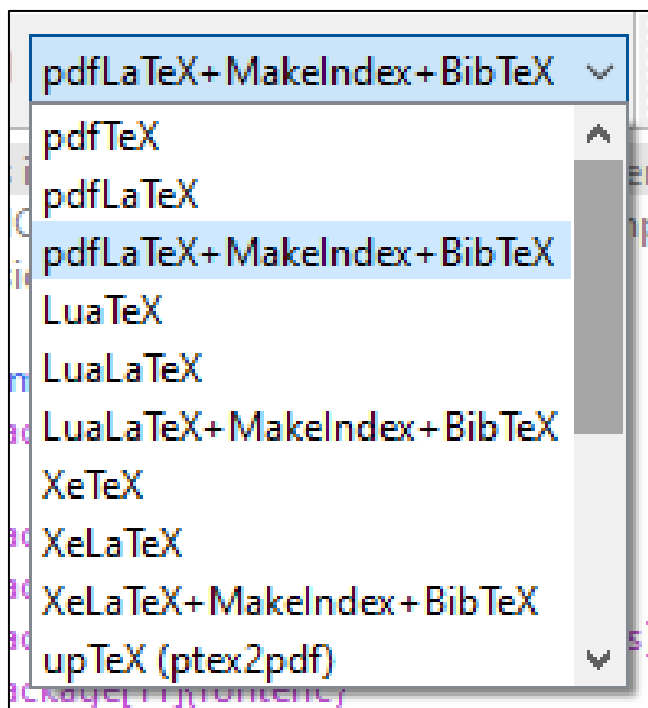
Fig 13: TeXworks Software and Output File

Fig 14: TeXworks Software and Output Files and Rendering Options

IV. CONCLUSION

LaTeX – A scientific documentation system use command for input text text. Many software using LaTeX technology use the same LaTeX command to design scientific articles. LaTeX is a high-quality typesetting system; it includes features designed for the creation of scientific and technical documents. LaTeX is the de facto standard for communicating and publishing scientific documents. LaTeX is available as free software from desktop applications to online web applications using CGI technology that loads the application on a server that processes the commands transmitted from web commands, similar to the servers that serve dynamic web pages with PHP and MySQL. There are no fees for using LaTeX, i.e. no licensing fees, etc. But of course, you are invited to support the maintenance and development efforts through a contribution to the TeX User Group (choose to contribute to the LaTeX Project) if you are happy with LaTeX. And when working at the commercial level, teamwork needs to upgrade teamwork for commercialization of scientific journal publishing, then need to pay for cloud computing packages to store data for team collaboration. Currently, the work of LaTeX team members through the GitHub sponsorship program for Frank, David and Joseph. Your contribution is not cut by GitHub for developers to support the project. Or enhance the teaching of technology to write scientific papers for publication in

international journals with Q1, Q2, Q3, Q4 standards. Volunteer efforts to provide LaTeX for you need financial support, so thank you for any contribution you are willing to make.

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