

Cisco Packet Tracer. Mininet is recommended for SDN research, and for more general analysis and research of network protocols, NetSim can be an excellent choice.

Table 1
Comparative analysis of network modeling tools

Criterion	Packet Tracer	Mininet	NetSim
Overview of Tools	Good	Good	Good
Supported Hardware and Technologies	Cisco-specific	Varied	Wide Range
Network Topology Modeling	Good	Good	Good
Programming and Automation	Limited	Good	Good
Usage in Education and Research	Good	Good	Good

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РОЗРОБКА БРАУЗЕРНОГО РОЗШИРЕННЯ ДЛЯ ГЕНЕРАЦІЇ ЕМЕЙЛІВ З ДОПОМОГОЮ ШТУЧНОГО ІНТЕЛЕКТУ

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DEVELOPING A BROWSER EXTENSION FOR EMAIL GENERATION WITH THE HELP OF ARTIFICIAL INTELLIGENCE

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Ключові слова: генеративний штучний інтелект, браузерне розширення, email-комунікація.
Keywords: generative artificial intelligence, browser extension, email communication.

Modern technologies of generative artificial intelligence (GAI) open up new possibilities for automating various processes, including business correspondence. GAI is capable of creating new content, adapting it to specific contexts and user requirements, which can significantly enhance the efficiency of work processes.

To explore the possibilities of implementing GAI in business processes, a new software product, EmoGPT, was created. The program is implemented as a Chrome browser extension and provides users with tools for automated generation of responses to emails in Gmail. A distinctive feature of EmoGPT is not only text generation but also the analysis of

the emotional tone of correspondence, understanding of context, and customization of response styles. In addition, users can add their own text instructions, which will be considered while generating a response. The development utilized technologies such as JavaScript, React.js, HTML, CSS, Chrome API, Gmail API, and OpenAI API. Email generation is facilitated by the generative model GPT-3.5 Turbo, which has been trained on a large amount of textual data, allowing it to understand the context of correspondence and create natural, meaningful responses.

The settings page of the EmoGPT browser extension serves as a central point for user customization. It allows users to tailor their interaction settings while maintaining data security, since EmoGPT directly communicates with Gmail and OpenAI without processing personal data. Users can link their personal OpenAI account here, which is free but may be subject to occasional delays or unavailability. For a more dependable experience, users can use a personal OpenAI API key. Additionally, the page offers options to personalize communication settings, including choosing a preferred first name, setting up custom salutations and email signature.

To enhance user accessibility, EmoGPT has been integrated directly into the Gmail interface. The browser extension injects a new icon into Gmail's toolbar. Clicking this icon opens a sidebar that displays EmoGPT's main user interface, providing a smooth and intuitive user experience (Figure 1).

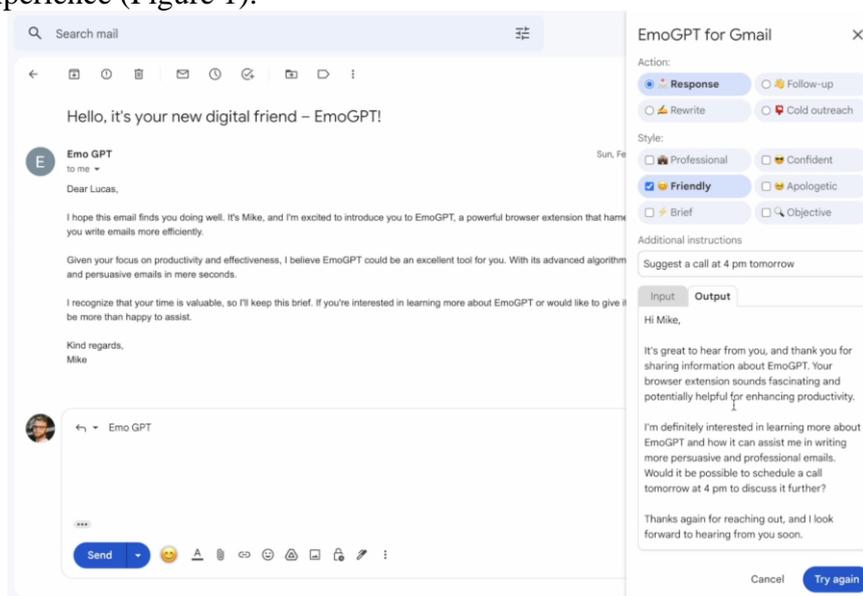


Figure 1: The main user interface of EmoGPT.

The development of EmoGPT demonstrates the potential of applying GAI in business. It can serve as a convenient tool for enhancing the productivity and efficiency of communication processes. Further research aimed at implementing GAI systems in business processes will have a significant impact on the development of the global economy in the near future. However, there are also certain limitations and challenges associated with using such tools. In particular, it is necessary to consider the risks of misinterpreting the context or excessive standardization of responses. It is also important to ensure the security and confidentiality of user data, as such tools often process sensitive information.