

## Visualized Environment to Build Chatbot for Learning and Training

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**Abstract:** Chatbots are a powerful tool in training and their usage as automated first-level support is ubiquitous, but leveraging chatbots requires learning the language that chatbots speak including the syntax, semantics, and other intricacies. Our research team has proposed a block-based, visual editing environment as Figure 1 shows below to alleviate the burden of knowledge imposed on users wishing to implement chatbots in their use of training and/or as an automated first-level of support. Users can use the block-based, visual editing environment to create RiveScript-powered chatbots without needing to know any RiveScript thanks to visual and text cues. See the following presentation recording for more details on the use of the platform:

<https://www.youtube.com/watch?v=G9TbwaNgW0s&list=PLOvm0EU5Q72iVx5hSa35BNj7z9ka01kO7&index=7>

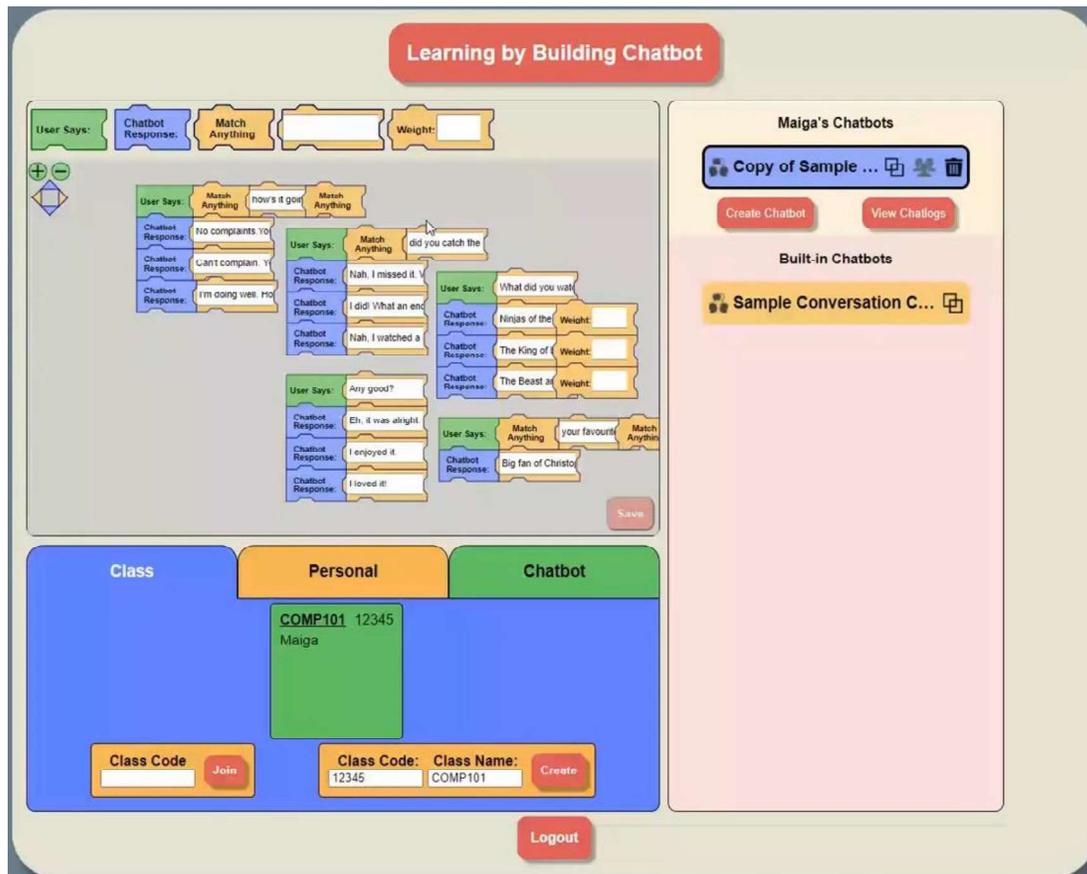


Figure 1. The Visualized Editing Environment for Building Chatbot (<https://vp.vipresearch.ca/>)

The platform the chatbots are hosted on also allows for teachers to share chatbots and review student chatbot interactions from a single website without the need to self-host a chatbot or distribute a program. Teachers can create chatbots as virtual person or patient for their students to practice the communication skills with customers, language speaking and writing skills with a waiter/waitress in the restaurant, bedside manner and skills with a patient in the clinic/hospital or an elder in the long-term care facility. Students can choose a pre-created or shared chatbot and then talk (via typing at this moment) to the chosen one. Via the interaction with the chatbots, they can practice at any time while having lunch, waiting at a bus stop, or during their commute to work/home.

Besides that, students can also create chatbots based on the knowledge they learned in the class; for instances, they can create a chatbot based on the grammars and words they have been taught in a second or foreign language course; or they can create a chatbot based on the taught policies and procedures, conversation practices, or drilling activities or in a customer relationship, a nursing education, or a language learning class. Teachers can assess students' mastery level of the specific knowledge or concept via "talking" to their chatbots.

**Keywords:** Block, RiveScript, Second Language, Foreign Language, Communication Skill, Grammar, Virtual Person, Virtual Patient, Virtual Customer, Practice

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