

TOOLS COMPARISON

FEATURES	P5.JS	PYTHON + TKINTER	PROCESSING	FLUTER	THREEJS	APP INVENTOR
Language	JAVASCRIPT	PYTHON	Own language called Processing It is based on Java.	Dart C++	JAVASCRIPT	JavaScript
User-friendliness	Easy to use	Tkinter is designed to be simple and easy to learn. Tkinter provides a variety of predefined widgets (buttons, labels, inputs, etc.) that can be easily added to the graphical interface.	Ideal for beginners (easy to use). Versatile for expert users.	Easy to learn and use. It is simpler for creating mobile applications.	High learning curve	It is easy to learn, since it uses block programming
Operating systems	Windows MAC Linux	Windows MAC Linux	Windows MAC Linux	Windows MAC Linux	Windows MAC Linux	Windows MAC Linux
Flexibility/ personalization	Highly customizable	It is a basic program that lacks design and customization. However, developers have the ability to create their own custom styles and themes allowing developers to create custom graphical interfaces tailored to their specific needs.	Compatible with: Serial ports Arduino IDE External applications (OSC, MIDI, WebSocket) Data files (CSV, JSON, PNG, JPEG) Web APIs (HTTP)	Compatible with: Visual Studio Code Python	Highly customizable	App Inventor combines an accessible (in terms of difficulty) approach to programming with the ability to create applications that have real impact. This type of environment is called low-floor, high-ceiling environments.
Functionality and characteristics (libraries)	drawing graphics, animations, interactivity, DOM manipulation, sound and video, has a variety of libraries	customizable features, flexible geometry management, interactive events, and customizable graphics,	Visual arts Graphics rendering Interactivity Data visualization Animation and motion graphics Cross-platform compatibility	Object development Applications development	drawing graphics 2D and 3D , animations, , interactivity, DOM manipulation, sound and video, has a variety of libraries	The compiler that translates the visual language of the blocks for the Android application uses Kawa (a language framework in Java that implements the Scheme programming language) as a programming language, distributed as part of the GNU operating system of the Free Software Foundation .
Conclusions	It would be used for artistic and creative projects, data visualization and creative experimentation.	Program that comes within Python and is not for artistic interface designs, it is mostly functional that gives you the necessary and basic tools for interface design.	Processing is beginner-friendly interface with simplified syntax, and immediate visual feedback. Its gentle learning curve, comprehensive documentation, and supportive community provide an accessible pathway for beginners to dive into coding, experiment with interactive projects, and unleash their creativity. Processing offers a welcoming and empowering environment for learning, experimentation , and creative projects .	Easy-to-use program and is aimed at generating mobile applications .	If you need interactive experiences with 3D objects, 3D graphics, 3D games.	Create an application in less time than others and you can program more complex applications in much less time than with more traditional, text-based languages. The graphical interface allows the user to create applications with many functionalities in blocks.