

# kurt

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I wrote kurt, a Python module for reading and writing Scratch project files.

Kurt also includes a compiler, which converts all the scripts in a project to text-based scratchblocks code, as used on the forums, and converts all the costumes to image files.

You can use kurt for:

- generating Scratch projects from Python code (eg. importing font files as costumes)
- analysing projects (eg. counting the number each type of block in a project)
- converting to other formats

By July, kurt will almost certainly have support for Scratch 2.0, including the ability to convert between Scratch 1.4 and 2.0. It'll hopefully have support for mods like BYOB and Snap! as well.

I'd like to talk about:

- what kurt can do, how to use it, and how it works
- using kurt to convert between formats
- projects that use kurt:
  - [Hairball](#) — a plugin-able framework for static analysis of Scratch projects (which was presented at SIGCSE)
  - [ScratchNXC](#) — a compiler of a subset of Scratch commands to Mindstorms NXT programs, supporting the standard NXT firmware
  - [M30W](#) — a text-based Scratch IDE

I might demonstrate a few of these projects (hopefully someone will have a NXT...!).

I might also mention Snapin8r, a Scratch 2.0 to Snap! converter made by Hardmath123.

A screenshot showing kurt's compiler:

