What we do with Python

1 Using Python in educational workshops

1.1 Workshop topics

1.1.1 PyGame

We regularly offer two-day workshops in which children and young adults are taught programming in Python from scratch, by tutors in their own age group. These workshops typically take place within the FrogLabs youth programmes offered at Free Software conferences. We usually build up on the enticing idea of allowing the kids to create their own games using the Python module PyGame. Participants work in groups of three to five on creating a video game of their own, which they present at the end of the workshop.

1.1.2 Veripeditus

Veripeditus is a free Python framework for the development of Augmented Reality games. Having started as a private project of two members to offer a free alternative to games such as Pokémon GO and Ingress, Veripeditus eventually became a Teckids project. We support the project and offers workshops in which children and young adults can create their own Augmented Reality games.

1.2 Workshop preparation and facts

1.2.1 Team

The game programming workshop team at Teckids is led by 16-year-old Eike Tim Jesinghaus, who has been a member and hobby game programmer for a long time. He is also the lead developer of the Veripeditus framework.

The team meets on a regular basis, like all other Teckids teams, to extend their knowledge, bring new team members on par with the experienced ones, and prepare and improve theit workshops.

1.2.2 Participants

The game programming workshop has been very popular since we first offered FrogLabs. Participant numbers have been growing steadily each year, with a peak 40 out of over 90 FrogLabs participants joining the game programming workshop during last year's FrOSCon. The participants' ages usually range between 10 and 16 years.

2 Development and maintenance of Python tools for education

2.1 Veripeditus - The Free AR Game Framework for Everyone

Veripeditus is a fairly new framework allowing everyone to create Augmented Reality games, independent of their knowledge about Python. Veripeditus, by now, is developed by a team inside Teckids, and the organisation sponsors the development.

Veripeditus is used in coding classes in one public German school, and has been presented at the annual computer sciences teachers' conference in Northrhine-Westphalia in April 2017, leading to a lot of interest in the framework and using Python in schools.

The first public beta release, including a web IDE and a public server reserved for educational use, is scheduled for May, 2017, and some computer science teachers have opted to become early adopters and help us improve the software for educational use.

2.2 Debian package maintenance

Teckids is also involved in the management and maintenance of Python modules that can be used in education environments. Members of Teckids are active in the Debian Python Modules Packaging Team, maintaining software useful for education (like PyGame) and dependencies of such software (like parts of the Flask framework, used in Veripeditus).

3 Making Python available

Teckids offers access to Python and educational tools to children and people involved in education.

We offer remote desktop access to a full Debian-based education environment to the public, so, for example, participants of our workshops can continue to use free software and Python at home, even if they cannot run it themselves on their parents' shared hardware.

Furthermore, we have started to provide a Git hosting service open to everyone involved in education, without the hassle with e.g. GitHub's terms of use, which make GitHUb and comparable services inaccessible to minors.

4 What we need money for

We need money for the following aspects, listed together with an estimate of our ywarly expenses based on previous years:

Aspect	Yearly expenses in
Workshop preparation (incl. travel and accomodation for tutors)	1000 €
Workshops, supporting participants, and the like	1000 €
Hardware and other materials for development and testing	500 €
Hosting and server maintenance	200 €