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SageMath

introduction

SageMath is a free open source mathematics software

Mission: *Creating a viable free open source alternative to Magma, Maple, Mathematica and Matlab.*

SageMath is **Open Source**

- ▶ You can use it for free
- ▶ You can install it for free
- ▶ Nobody owns it
- ▶ You can see the source code
- ▶ You can share, modify, re-distribute, or even sell... But you cannot close it!

SageMath is a **mathematics** software

▶ Built on top of **many** other open source softwares: Atlas, GAP, GMP, Linbox, Maxima, MPFR, PARI/GP, NetworkX, NTL, Numpy/Scipy, Singular, Symmetrica,...

▶ But also, a **native library** in **python** and **cython**: combinatorics, number theory, graphs, discrete geometry, ...

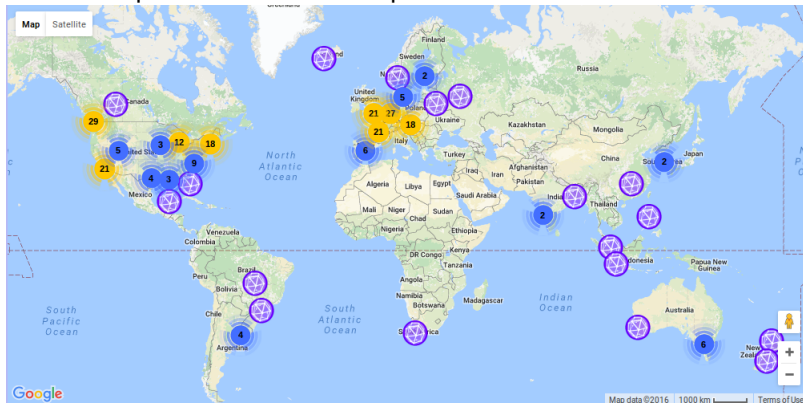▶ 750k lines of codes, 5344 classes, 54110 functions (2015)

How did it start?

It was initiated by William Stein in 2005.

Who writes Sage?

All of us! Sage is written **by users, for users**: 271 contributors in 191 different places. Sage is a **community** and takes its decisions as such.

The Sage community

271 developers in 191 different places.

Mailing lists, Sage days

How can I use Sage?

▶ native install on Linux, Mac, and Windows
▶ online on **CoCalc.com**

Let's work!