# Octave

- Interactive language for matrix manipulation, ODE solving, etc. (Not symbolic.)

- Generally compatible with MATLAB.

- About 100k LOC in C++, plus about 80k LOC of standard Fortran numeric codes. (blas, lapack, linpack, etc.)

- Originally intended as an adjunct to a ChemE text.

- Under GPL.

- Single author, but significant contributions from users.
  - (ChemE dept. at Madison)
- Program is about six years old.
- Actively under development.
  - Last release Feb. 24, 1998.
  - Mailing lists relatively active; frequent contributions from author.
- Author appears to want to develop it further, but no stated long-term commitment.
  - (Soliciting funding for further development.)

- Runs on many unix systems, plus w32 (with Cygwin tools).

- Follows GNU standards, and makes heavy use of GNU tools.

- To run:
  - gnuplot (not really GNU).
  - info.

- To run tests:
  - dejegnu.

- To build from source distribution:
  - gcc
    * Developed exclusively with gcc. But shouldn't be too difficult to port to a different compiler on unix.
  - make (only GNU make will work).

- For development:
  - bison.
  - flex.
  - gperf.

- Not much internal documentation, but code looks relatively clean.
- Uses a large amount of Fortran, from standard numerical libraries.
- Fortran sources included in Octave distribution.
  - Slightly modified to remove `STOP` statements.
  - Diffs from standard versions are provided.
- Users don't care what's written in Fortran.
  - Except that Fortran code can't be called recursively.