

Colin Klipsch

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Objective

Senior software development position in the management, processing, analysis, or visualization of science mission data.

Education

- ◆ **B.S. in Astronomy and Astrophysics**, Indiana University, Bloomington, Indiana, May 1989. GPA: 3.5/4.
- ◆ **M.S. in Computer Science and Applications**, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, Dec. 1993. Worked on geometrical algorithms in computer cartography. Was accepted into doctoral program and pursued Ph.D. from Jan. to Dec. 1994. GPA: 3.5/4.

Skills

- ◆ Programming languages: C, C++, Objective-C, IDL (RSI, now ITT-VIS), Python, Perl, Java, JavaScript, and Fortran. Programming tools: Unix shell scripting and development utilities, version control software, Apple's XCode.
- ◆ Software standards: XML, Web CGI, SQL, OpenGL, MacOS X and Cocoa, Tcl/Tk, X-Windows. Scientific data formats: CDF, HDF, UDF, FITS.

Experience

- ◆ **Research and Teaching Assistant**, Dept. of Astronomy, University of Virginia, Aug. 1989 to Aug. 1991. Worked on theoretical models of supernovae. Used and extended C software to simulate the fluid dynamics of shock waves within massive stars.
- ◆ **Research and Teaching Assistant**, Dept. of Computer Science, Virginia Tech, 1991 to 1995. Worked on *Project GeoSim*, a suite of educational software for college geography students. Wrote software libraries for the Macintosh, PC/DOS, and Unix/X-Windows environments to support platform-independent graphical user interfaces.
- ◆ **Programmer/Analyst** for Hughes STX, on-site at the NASA Goddard Space Flight Center (GSFC), 1995 to 1999. Developed and maintained data ingest, media distribution, and Sybase DB interface software, in C and C++, in support of the RXTE X-ray mission.
- ◆ Programmer/Analyst for Raytheon ITSS at GSFC, 1999 to 2000. Developed file processing and Oracle DB interface software, primarily in Java, for the NSSDC DIONAS file archiving project.
- ◆ Programmer/Analyst for Raytheon ITSS, later QSS Group starting in Nov. 2002, at GSFC. Worked on several projects in parallel:
 - Maintained and extended the IMAGE SMOC data delivery website, for distributing IMAGE data products to scientists. (Perl, Python, CGI).
 - In Goddard's Space Physics Data Facility, helped maintain and extend CDFx, SSCWeb, CDAWeb, and CDAWeb Plus software, for plotting and delivering data products from a wide variety of space physics missions. For CDAWeb, also designed and maintained ingest software for new datasets. (IDL, CGI, Perl, Python, C, XML, CDF, some Postgres.)
 - Developed interactive software for the *Solar System Radio Explorer* kiosk, as part of an Education & Public Outreach grant. (MacOS X, Objective-C).