

CIRES/GSD Professional Research Assistant

The Cooperative Institute for Research in Environmental Sciences (CIRES) in Boulder, Colorado at the University of Colorado, Boulder has an opening for a Professional Research Assistant working on Earth System and environmental data visualization. The successful candidate will collaborate with researchers in the NOAA Earth System Research Laboratory – Global Systems Division, working on the Science On a Sphere (SOS) project. The SOS project was created to further NOAA's educational goals and promote environmental literacy through informal education programs.

Description of Responsibilities

SOS is a Linux based visualization system that uses 3D accelerated PC hardware and video projectors to display animated images of global Earth System data on to the outside of a 6' sphere. The system is a conglomeration of numerous technologies, PCs, projection systems, networks, remote controls, video switching systems, and kiosks used to create a single integrated display system. The candidate will be expected to work on numerous parts of the system. The system is written primarily in a mixture of C++, Java and TCL/TK with supporting web service based applications. Working closely with team members, the candidate will:

- Help develop, maintain, and support the SOS system primarily through software development
- Possess broad knowledge in developing interactive, 3D visualization systems based on OpenGL
 - Have a thorough understanding of the Linux operating system, system services, networked systems, and PC hardware
 - Contribute to some of the following development and maintenance activities:
 - Develop OpenGL software, including shader programs to optimize display performance
 - Optimize OpenGL graphics performance on CPU and GPU
 - Play compressed video files and streams to textured OpenGL surfaces
 - Synchronize multiple SOS video displays across the Internet
 - Integrate KML files and Internet data with existing SOS display capabilities
 - Use of a Wii controller as a remote control for SOS (including Bluetooth connection)

Duties:

- Work under the supervision of SOS development team leader to develop software
- Work with the SOS user
- Must be willing and able to travel to support SOS installations and exhibits

Requirements:

- Bachelor of Science degree in Computer Science or related Computer Engineering degree

Skills:

- Experience level: 5-10 years of software development experience in a Linux environment.
 - Software experience among the following: C/C++, Java, Python, Shell Scripts, OpenGL, GLSL, Unix/Linux system calls and libraries, XML, TCP/IP network communications, Linux device drivers.
 - Experience with most or all of these technologies: PC hardware, 3D video cards, video switching gear, video projectors, Bluetooth, Wi-Fi, interactive kiosks.
 - Understanding of 3D graphics development, video and image file formats, and software systems that display video or scientific/environmental data.

The position will be filled as a Professional Research Assistant in CIRES, University of Colorado at Boulder, and will be eligible for employee benefits. Screening will begin immediately and continue until the position is filled.

To Apply

Search for this position using:

www.jobsatcu.com/applicants/Central?quickFind=65298

Job Number 814032

Be prepared to upload your current resume, proof of your degree (upload under Doc 1), and a letter of recommendation (upload under Doc 2).

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