



ESO  
European Organisation  
for Astronomical  
Research in the  
Southern Hemisphere



## Training Opportunity for Portuguese Trainees

Title	Duty Station
Software Engineer Data Flow Infrastructure	ESO HQ, Garching/Germany
<p><b>Science Operations Software Department:</b></p> <p>The Science Operation Software Department (SCS) within the Directorate of Engineering (DoE) is responsible for all science operation software for the end-to-end operations of ESO observatories, LaSilla-Paranal, ALMA, and E-ELT. Science operation software includes all components required for proposal submission, scheduling, execution, archiving, processing, visualization, and quality control of the observations. This software is used by operational teams within the organization for planning and running scientific operations, as well as by scientific users in the community for the handling of observing proposals, the preparation of observations, as well as the access and processing of observation data. The ESOCast 186: Engineers at ESO gives a glimpse of the engineering work done in the Directorate of Engineering <a href="https://www.youtube.com/watch?v=thft_cCr05g#action=share">https://www.youtube.com/watch?v=thft_cCr05g#action=share</a></p>	
<p><b>Proposed Field of Activity:</b></p> <p>The successful candidate will have the opportunity to work within the Dataflow Infrastructure Group of the SCS Department, to work on the second development stage of the Archive Service Project.</p> <p>The Archive Science Project delivered its first release in June 2018. It provides enhanced query and access services to the assets of the ESO Science Archive, which is the collection and distribution point of data from the La Silla Paranal Observatory. Two entry points are made available to users: a graphical, web based one (<a href="http://archive.eso.org/scienceportal">http://archive.eso.org/scienceportal</a>) and a programmatic one, based on Virtual Observatory protocols (<a href="http://archive.eso.org/cms/eso-data/programmatic-access.html">http://archive.eso.org/cms/eso-data/programmatic-access.html</a>). The necessary supporting back-end infrastructure is also part of the project.</p> <p>The second development stage will deliver the following features:</p> <ul style="list-style-type: none"><li>• Cut-outs of images, data cubes and catalogs</li><li>• Selective download of one or a few extensions of a selection of files (raw data)</li><li>• Previewer for 3D data cubes</li><li>• Catalogue previews</li><li>• Search on proposal abstracts and titles</li><li>• Link to Telescope Bibliography</li><li>• Search for Solar System objects</li><li>• SODA VO protocol</li></ul>	
<p><b>Required Education:</b></p> <p>Applicants should have completed or be in their final year of a university course at master's level in computer science. The profile required is for a young software engineer, with strong skills in Java development, as well as Javascript, SQL, and Web Development. Other desirable skills include Spring boot, Angular or other Javascript framework, Python, Elasticsearch.</p> <p>Candidates must be fluent in English (both spoken and written), ESO's official language.</p> <p>Candidates should have good interpersonal and communication skills and should be able to work in a multi-cultural environment, both independently and as part of a team.</p>	