Scientific Software Developer Scientific Software Developer Scientific Software Developer - ADNET Systems, Inc North Potomac, MD 21 years of software development for data processing, analysis, archive, simulation, and data service experience with recent emphases on interoperability software, data visualization, data format and conventions. Authorized to work in the US for any employer Work Experience Scientific Software Developer ADNET Systems, Inc 2006 to Present Develop strategies and support implementation and testing to expand and improve data interoperability. Develop strategies and support implementation and testing to provide data aggregation service. Evaluate NASA earth science data products to ensure metadata compliance and maximum serviceability. Designed products and processing systems, developed, implemented, and tested algorithms, implemented and debugged processing software to reduce AMSRE, TMI, Windsat, and AMSR2 data to processing level-2 and 3 Land Parameter Retrieval Model (LPRM) soil moisture products. Participated in an Agile project and developed a data visualization component of a web application at NASA Goddard. Conducted full-cycles of a data archiving software development at Goddard Distribute Active Archive Center, including design, implementation, integration, testing, and release. Coordinated and implemented multi-institutional data service projects involving NASA, OPeNDAP, The HDF Group, UNIDATA, COLA, and multiple universities. Worked as a contributor regularly in the working groups of the NASA Earth Science Data and Information system. Cognizant Software Engineer California Institute of Technology 1999 to 2006 Led full-cycle development of spacecraft ground data processing systems for NASA astrophysical missions. Analyzed high-level requirements and developed software functional and data management requirements at the system and modular levels. Developed data calibration algorithms and software to meet calibration standards. Developed data processing algorithms to meet the functional requirements. Conducted analysis of data products and assessment of operational effectiveness of the data processing system. Conducted modeling based on ground calibration to derive parameters for data processing, evaluated qualities of data reduction, and validated data products. Led integration and testing efforts for major software releases and software patches. Supported system migration and testing efforts by instrument specialists. National Research Council Fellow Jet

Propulsion Laboratory 1997 to 1999 Developed new algorithm and simulation software to support image processing and analysis. Analyzed and derived parameters for spacecraft dithering. Supported space mission planning and science operations. Education Ph.D. of Astrophysics in Astrophysics The University of Virginia 1997 BA of Physics in Physics Peking University 1989 Skills DATA VISUALIZATION (10+ years), C++, DESIGN PATTERNS, FORTRAN, JSON, Java, C, Python, scientific data formats (10+ years), DAP, w10n, GIS (10+ years), MYSQL, Git, MYSQL Additional Information Relevant Skills: Hardware/Operating Systems: Mac OSX, PC Linux, SUN Solaris, Windows. Skills: Scientific data formats and models including HDF4/5, HDF-EOS2/5, netCDF3/4, NcML and JSON, GRIB1/2, FITS, Binary, DAP, and format conversion tools. Interoperability Software including OPeNDAP Hyrax, THREDDS Data Server, GrADS Data Server, w10n with Apache, OGC WMS and WCS servers, Lats4d, NCO, NCL, and data visualization tools include IDV, Panoply, GrADS, Ferret, and NCL. Data interoperability conventions including COARDS, CF, ACDD, CMIP/CMOR. Datacasting and RSS feed. PostgreSQL, MySQL, Informix and other relational database, XML technologies, Microsoft Office Suite utilities including Word, PowerPoint, and Excel, UML, design patterns and object-oriented design. Languages: C/C++, Perl, Python, R, Java, FORTRAN, CGI, MATLAB, NCL, NCO, UNIX Shell.

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