

# Data System Specialist

Please see Special Instructions for more details.

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For additional information please contact:

Katy Kavanagh  
katy.kavanagh@oregonstate.edu

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**Department:** Forest Ecosyst & Society (FOR)

**Position Title:** Specialist 2-IT Res

**Job Title:** Data System Specialist

**Appointment Type:** Professional Faculty

**Job Location:** Corvallis

**Benefits Eligible:** Full-Time, benefits eligible

**Remote or Hybrid Option:** Yes

### **Job Summary:**

**The Department of Forest Ecosystems and Society is seeking a Data System Specialist. This is a full-time (1.00 FTE), 12-month, professional faculty position.**

Funding for this position lasts through 2028, and has the possibility of being renewed.

The Data System Specialist leads the design, implementation, and management of comprehensive data collection systems for the Elliott State Research Forest (ESRF) in the Southern Oregon Coast Range. This position plays a pivotal role in establishing and maintaining the digital infrastructure that will support long-term research initiatives and environmental monitoring across this 82,000-acre living laboratory.

The position coordinates the full data lifecycle, from initial collection through long-term preservation, ensuring alignment with OSU's IT infrastructure and compliance standards while respecting tribal data sovereignty requirements. Key responsibilities include developing secure database systems, implementing real-time data streaming capabilities, creating web-based data portals, and establishing robust backup and disaster recovery protocols. The incumbent will ensure that data systems meet both immediate research needs and support long-term data preservation beyond the initial three-year grant period. This position develops and maintains secure data sharing protocols that balance open science principles with the need to protect sensitive environmental and cultural data.

Working at the intersection of technology and environmental monitoring, this role collaborates with a diverse group of collaborators including researchers, faculty, tribal communities, and public agencies. The incumbent works closely with the ESRF Instrument Specialist to integrate field instrumentation with data systems, ensuring seamless data flow from collection to analysis. This position leads the design and management of custom relational and spatial databases, performs geographic information systems (GIS) analysis, and develops software tools to support regional-scale vegetation modeling and mapping.

### **Why OSU:**

**Working for Oregon State University is so much more than a job!**

Oregon State University is a dynamic community of dreamers, doers, problem-solvers and change-makers. We don't wait for challenges to present themselves — we seek them out and take them on. We welcome students, faculty and staff from every background and perspective into a community where everyone feels seen and heard. We have deep-rooted mindfulness for the natural world and all who depend on it, and together, we apply knowledge, tools and skills to build a better future for all.

### **FACTS:**

- Top 1.4% university in the world
- More research funding than all public universities in Oregon combined
- 1 of 3 land, sea, space and sun grant universities in the U.S.
- 2 campuses, 11 colleges, 12 experiment stations, and Extension programs in all 36 counties
- 7 **cultural resource centers** that offer education, celebration and belonging for everyone
- 100+ undergraduate degree programs, 80+ graduate degrees plus hundreds of minor options and certificates
- 35k+ students including more than 2.3k international students and 10k students of color
- 217k+ alumni worldwide
- For more interesting facts about OSU visit: <https://oregonstate.edu/about>

### **Locations:**

Oregon State has a statewide presence with campuses in Corvallis and Bend, the OSU Portland Center and the Hatfield Marine Science Center on the Pacific Coast in Newport.

Oregon State's beautiful, historic and state-of-the-art main campus is located in one of America's best college towns. Corvallis is located close to the Pacific Ocean, the Cascade mountains and Oregon wine country. Nestled in the heart of the Willamette Valley, this beautiful city offers miles of mountain biking and hiking trails, a river perfect for boating or kayaking and an eclectic downtown featuring local cuisine, popular events and performances.

### **Total Rewards Package:**

Oregon State University offers a **comprehensive benefits package** with benefits eligible positions that is designed to meet the needs of employees and their families including:

- Medical, Dental, Vision and Basic Life. OSU pays 95% of premiums for you and your eligible dependents.
- Free confidential mental health and emotional support services, and counseling resources.
- Retirement savings paid by the university.
- A generous paid leave package, including holidays, vacation and sick leave.
- Tuition reduction benefits for you or your qualifying dependents at OSU or the additional six Oregon Public Universities.
- Robust Work Life programs including Dual Career assistance resources, flexible work arrangements, a Family Resource Center, Affinity Groups and an Employee Assistance Program.
- Optional lifestyle benefits such as pet, accident, and critical illness insurance, giving you peace of mind and the support you need to thrive in all aspects of your life.

Future and current OSU employees can use the **Benefits Calculator** to learn more about the full value of the benefits provided at OSU.

### **Key Responsibilities:**

#### **60% Data Management and Instrumentation Integration**

- Design a comprehensive data management plan to capture baseline terrestrial and aquatic conditions across the ESRF.

- Design a data structure and standards that accommodates real-time data streaming, quality assurance, and long-term archiving including Data Security and Access Control.
- Responsible for data quality and that specific data rules are developed and applied.
- Ensures metadata is structured and validated to conform to standards.
- Design, populate and manage spatial and relational databases. Design management structures to provide intuitive and secure access in a multi-user environment. This responsibility includes integrating new data into existing data structures, managing complex permissions to provide areas for sensitive information and ensuring updates to databases are handled by resolving conflicts and informing users.
- Acquire data and perform quality assurance.
- Distribute spatial and tabular data to researchers. As the primary distribution contact, this responsibility involves responding to user requests and questions, performing analysis if required and documenting the distribution. It is also important to understand the various technologies and methods for data transfer.
- Plan for Business Continuity and Disaster Recovery
- Design, implement and communicate results of spatial analyses using geographic information system (GIS) software.

### **15% Information System Design and Web Portal**

- Develop a web-based data portal accessible to researchers, stakeholders, and the public.
- Plan for the overall information system architecture including data and metadata schema.
- Ensure web pages are designed and updated; and that web application programs are developed and implemented.

### **10% Collaboration**

- Collaborate with tribes, OSU faculty and staff, Department of State Lands ESRF staff, and others on equipment type and placement and data access.
- Works with scientists, cooperators, and others in designing databases for dynamic access on the web and archival, or for determining other technical solutions to research questions.
- Continual interaction is necessary with the researchers while study data sets are being developed to assure appropriate metadata (experimental designs, methods, abstract) is provided, and that data quality is assured.
- Work closely with the Instrument Specialist to ensure data and instrumentation are seamlessly integrated.

### **5% Training, Documentation, and Reporting**

- Develop and maintain comprehensive documentation for all data systems, including technical specifications, user manuals, and standard operating procedures
- Create instructional materials and user guides for web-based data portals and tools
- Maintain detailed documentation of system configurations, custom code, and operational procedures
- Prepare and submit regular grant reports documenting technical progress and system implementation
- Generate metrics and analytics reports on system usage and data collection activities

## **10% – Supervision**

- Provides leadership, supervision, and direction for assigned technical staff; plans, assigns, and reviews work; establishes goals for each position; and assesses performance through completion of written evaluations. Acts on disciplinary issues in coordination with other university offices. Recruits and interviews candidates; sets work schedules to ensure consistent operations; and manages the day-to-day work at remote facilities.

## **What You Will Need**

- Bachelor's degree in Computer Science, Information Systems, or related field; OR
- Bachelor's degree in Natural Resources, Environmental Science, or related field plus 3 years of experience in research data systems management
- 2 years of experience with database management systems (MSSQL, PostgreSQL, etc.)
- Experience with database design and management
- Demonstrate experience in web application development
- Experience with data quality control and validation procedures
- Proficiency in at least one programming language (Python, R, or similar)
- Knowledge of metadata standards and data documentation
- Experience with version control systems
- Strong written and verbal communication skills
- Proven ability to effectively communicate and collaborate with individuals from a variety of backgrounds and experiences.

This position is designated as a critical or security-sensitive position; therefore, the incumbent must successfully complete a criminal history check and be determined to be position qualified as per University Standard: 05-010 et seq. Incumbents are required to self-report convictions and those in youth programs may have additional criminal history checks every 24 months.

This position requires driving a university vehicle or a personal vehicle on behalf of the university; therefore, the incumbent must successfully complete a motor vehicle history check, possess and maintain a current, valid driver's license in their state of residence, be determined to be position qualified and self-report convictions as per University Policy 05-030.

## **What We Would Like You to Have**

- Master's degree in Computer Science, Information Systems, or related field
- Advanced coursework in natural resources or environmental science
- Experience with GIS software and spatial data management
- Experience working with environmental or ecological research data
- Previous experience in academic research settings
- Experience with tribal data governance and sovereignty considerations
- Experience with cloud computing platforms (e.g. AWS, Azure)
- Knowledge of data visualization tools and libraries
- Experience with automated testing and continuous integration
- Experience with real-time data streaming and sensor networks
- Demonstrated experience in cross-cultural communication
- Project management experience
- Experience training and mentoring others in technical skills

- Track record of successful collaboration with individuals from a variety of backgrounds and experiences.
- Experience writing technical documentation and user guides

### **Working Conditions / Work Schedule**

Some field work is required, along with travel to the ESRF site. Ability to drive on forest roads, to conduct field work in rough/uneven terrain and inclement weather. Some evening and weekend work may be required.

**Pay Method:** Salary

**Pay Period:** 1<sup>st</sup> through the last day of the month

**Pay Date:** Last working day of the month

### **Recommended Full-Time Salary Range**

\$78,000-\$103,000

### **Link to Position Description**

[https://jobs.oregonstate.edu/position\\_descriptions/165169](https://jobs.oregonstate.edu/position_descriptions/165169)

**Closing Date:**

**03/27/25**

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## Supplemental Questions

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Required fields are indicated with an asterisk (\*).

## Documents Needed to Apply

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### Required Documents

1. Resume
2. Cover Letter

### Optional Documents

1. VETERANS ONLY: Must provide proof of Veteran Status (DO NOT upload any unrelated documentation - information uploaded to this field will be removed once reviewed)