



POSITION DESCRIPTION

Summer 2022

NPS UNIT: Sonoran Desert Network

Position #: 139

Position Title: GIS Assistant

Primary natural resource discipline: Physical Sciences

Position Keywords: Data Science, Data Visualization, Python/R Programming, Open Data, cloud GIS

Location: Tucson, Arizona

COVID-19 NOTICE

As the COVID-19 pandemic continues to change and evolve, project timelines and structure remain flexible and it may be necessary to postpone start dates, begin work remotely, or reformulate the project's description. Should any development in the COVID-19 outbreak impair a project's timeline or results, the SIP Team will work with the park and project mentors to assess the situation and determine the best course of action at that time.

POSITION DESCRIPTION AND WORK PRODUCTS

Project Description: This position will give the intern experience working in a dynamic data environment. The intern will participate in a team of professional natural resource data managers responsible for supporting natural resource monitoring in AZ, NM, TX, OK, KS, CO and UT. At any given time, the team could be working on some aspects of IT infrastructure, mobile field data collection, data engineering in geospatial or relational databases, application development and support, data quality analysis, dataset production or data presentation through visualizations and reports. During the internship the intern will be expected to participate in and contribute to several projects based on their interest and skills. The projects range from analyzing datasets and preparing them for publication to meet Open Data policies, to visualizing data in a dashboard in order to improve natural resource managers' access to information, to integrating AI into our data management workflows.

Work Products: Depending on the projects selected, the intern will provide either an analysis report, a data visualization (e.g., dashboard or StoryMap), a standard operating procedure (SOP), a code repository or whatever else bright minds these days come up with to explain what they've done.

NATURAL & PHYSICAL WORK ENVIRONMENT

A majority of the work is performed in an office setting with adequate light, heat, and ventilation. Occasional field visits may create exposure to a variety of physical settings including extreme climatic conditions and rugged terrain. Summer temperatures can exceed 100F, with mild fall and winter conditions. The Desert Research Learning Center is located on the eastern edge of Tucson, a vibrant city with numerous amenities. Shopping is approximately 10 minutes (driving) away.

QUALIFICATIONS



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- A qualified data science intern would have or be interested in learning some or all of the following:
- Skill in working in a team environment and building successful relationships with colleagues.
 - Knowledge of data management concepts, principles, methods and practices.
 - Experience managing both tabular and spatial data using geodatabases, Access, or SQL Server.
 - Knowledge of relational database design principles and experience in applying these principles to the design, development, and maintenance of complex relational tabular and spatial databases.
 - Ability to use Structured Query Language (SQL) in relational databases to perform data management tasks, complex database queries (e.g. multiple joins, data summarization, nested queries) and export data out of databases in both tabular and spatial formats.
 - Understanding of how to manage data through its life cycle (data entry to archiving).
 - Knowledge of Esri software packages for GIS (e.g. ArcGIS Pro, Field Maps, Survey123), database management (e.g. ArcSDE, SQL Server), and cloud based data services (AGOL and Esri Portal) and the skill to apply these technologies to effectively accomplish data management goals.
 - Use knowledge of natural resources and data visualization to create dashboards and reports using supported technologies (ArcGIS, SQL Server Reporting Services, Holoviews, etc.).
 - Develop and modify code written in Python, VB.NET, VBA, SQL, R, and/or other programming languages for both application development and support and monitoring data analysis.
 - Working knowledge of Python Xarrays and remote sensing image processing techniques using the Pangeo stack.
 - Knowledge of AI and machine learning workflows and deploying prediction algorithms in production.
 - Written and oral communication skills.
 - Detail oriented and well organized.

The applicant must be a U.S. citizen or U.S. permanent legal resident (“green-card-holder”). Prior to starting this position, a government security background clearance will be required.

VEHICLE AND DRIVER LICENSE REQUIREMENTS

Applicant must have a valid driver's license to drive a government vehicle.

A personal vehicle is recommended for this position.

If the SIP is required to drive a park vehicle for their position, Stewards will perform a driving records search, and the SIP's ability to drive a park vehicle during work hours will be contingent upon the results. SIPs will have to have had their license for 3 years or be over the age of 21 to be insured as drivers under Stewards insurance policy. Examples of things that will preclude a SIP from driving a park vehicle include: SIP under the age of 21 years old that has been licensed less than three years, DUIs, multiple moving vehicle violations, suspended or revoked license, or three or more accidents (regardless of fault) in the last 3 years. If the driver's search is favorable, Stewards will provide driver's liability insurance while the intern is driving a NPS vehicle for their SIP position. If the SIP is denied coverage by Stewards, they will not be permitted to drive during work hours.

HOUSING

Park housing is available and will be provided at no cost to the participant. Park housing is available and will be provided at no cost to the participant. This includes a fully furnished private room at the Desert Research Learning Center. A shared kitchen, restrooms, and laundry facilities are available on-site. Linens, dishes, and WiFi are also provided.

INTERNSHIP DATES

Start Date: 05/02/2022

Number of Weeks: 52

Flexible Start Date: Yes

LIVING ALLOWANCE

52 Weeks (\$400.00/week =\$20800.00)



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RELOCATION ALLOWANCE

350.00

AMERICORPS PROGRAM



AmeriCorps

AmeriCorps is a program that engages individuals in intensive community service work with the goal of “helping others and meeting critical needs in the community”. The SIP Program is supported through AmeriCorps by providing a Segal Education Award in addition to the SIP’s living stipend and relocation allowance.

Upon successful completion of the SIP position, the SIPs (AmeriCorps members) are eligible for a \$1,638 - \$6,195 pre-tax education award that can be used for paying back student loans or for continuing their education. The amount of the education award is based on the length of the position.

AmeriCorps limits the number of terms an individual can serve to 4 terms. If an applicant has previously completed 4 SIP or other AmeriCorps positions, they will not be eligible to apply for an additional SIP position.

Partners

This position is offered through the National Park Service's Scientists in Parks (SIP) Program in partnership with various organizations.

