

**Opportunity Title:** Bioinformatic Assistant

**Opportunity Reference Code:** EPA-SSP-0005-6

**Organization** U.S. Environmental Protection Agency (EPA)

**Reference Code** EPA-SSP-0005-6

**How to Apply** **Ready to send share your interest with EPA scientists?**

- Submit application and supporting documents by clicking on Apply Now button.
- *For more information, contact* EPAjobs@orau.org. Do not contact EPA directly.
- Check out our website at: <https://www.orau.org/epa/>

**Description** The EPA National Student Services Contract has an immediate opening for a full-time Bioinformatic Assistant with the Office of Research and Development at the EPA facility in Raleigh, NC.


The Office of Research and Development at the EPA supports high-quality research to improve the scientific basis for decisions on national environmental issues and help EPA achieve its environmental goals. Research is conducted in a broad range of environmental areas by scientists in EPA laboratories and at universities across the country.


#### What the EPA project is about

ORD bioinformatic research serves to provide, among other functions, a bioanalytical and computational infrastructure to facilitate research on a variety of research topics. Current scientific projects range from (1) large genomic and transcriptomic dataset integration and analysis; (2) database and front-end development efforts; (3) nanoinformatics and nano-curation efforts (4) QA/QC practices for data transfer, code sharing and backup; (4) semantic mapping of biological information to address Agency questions. ORD bioinformatic research seeks to develop an integrated framework across health end points through the identification of toxicological pathways. This approach is accomplished by the use of computational and molecular approaches to characterize "key events" for biologically based models, the association of molecular key events with chemical, disease and, pathway, and the application of genetic and epigenetic approaches for understanding differential susceptibility.


#### What experience and skills will you gain?



Investigators across the Agency are involved in diverse areas of research, including systems biology, a variety of 'omics' disciplines, as well as database development and data curation. You will have the opportunity to be a member of a multi-disciplinary research team and work with computational biologists, EMVL contractors, and other members of ORD's software development and informatics teams to support research efforts. In addition to scientific projects, you will be conducting


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work with the National Computing Center (NCC) Linux/Unix Staff to support the efficient and reliable operation of the organization's computational cluster, platforms, storage and the associated operations and support tools.

#### **Required Knowledge, Skills, Work Experience, and Education**

- Experience programming in at least one modern general-purpose programming language such as Perl, Python, C++, R, or Java;
- Experience programing in SQL or related structured query languages;
- Experience with semantic web, ontology mapping, and structured query languages, such as RDF and sparql;
- Experience in computational manipulation and analysis of diverse datatypes, such as genomic, proteomic, transcriptomic ;
- Coursework or equivalent work experience with, and front-end development;
- Strong written, oral and electronic communication skills;
- Proficiency with Microsoft Office applications (i.e., Excel, PowerPoint, Word, Outlook);
- Experience with Unix or Linux operating system; and
- Experience with cloud computing services.

#### **How you will apply your skills**

##### **Application and Programming responsibilities**

- Working knowledge of emerging computational and semantic technologies and best practices;
- Maintaining existing code and scripts that may or may not access databases;
- Developing code or modifying existing code for quality assurance in data transfer and analysis diverse data types;
- Updating analysis software and standard procedures for server and database access, ticketing systems for software development tasks;
- Creating and maintaining web components using the Node.JS web framework;
- Participating in Agile (Scrum) software development; and
- Participating in team code reviews, maintaining records of meetings, correspondence, and action documents, and maintain a system to track projects in progress.

##### **Communications-related responsibilities**

- Participating as a member of a multi-disciplinary research team;
- Interacting with other members of the Bioinformatics team as well as NCC and other EPA scientists;
- Translating complex computational concepts in ways that can be understood by those with varying levels of relevant

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technical knowledge;

- Assisting with IT project execution; and
- Presenting work performed in the course of their EPA student contractor service as a poster or presentation at a scientific conference or other forum.

**Location:** This job will be located at EPA's facility in Raleigh, NC.

**Hours:** Full time.

**Salary:** Hourly wage for hours worked at a rate of \$21.59 per hour.

**Employer:** Selected applicant will become a temporary employee of ORAU working as a contractor at EPA.

**Travel:** Occasional overnight travel may be required.

**Working Conditions:** The selected candidate will be supervised by a mentor who will provide day-to-day direction, as well as coach, advise and counsel the candidate, and review the candidate's work. This position will involve work in an administrative setting and is not expected to involve exposure to hazardous elements.

**Expected Start Date:** The position is full-time and expected to begin in March 2020. The initial project is through May 14, 2020 with potential optional periods.

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#### Qualifications

- Be at least 18 years of age **and**
- Have earned at least a Bachelor's degree in Bioinformatics, Computational Biology, Information Technology, Computer Information Systems, Computer Science, or a closely-related field of study from an accredited university or college within the last 24 months, **and**
- Be a citizen of the United States of America or a Legal Permanent Resident.

*EPA ORD employees, their spouses, and children are not eligible to participate in this program.*

#### Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 24 months or anticipated to be received by 1/31/2020 11:59:00 PM.
- **Overall GPA:** 2.00
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (16 👁)
  - **Environmental and Marine Sciences** (1 👁)

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◦ **Life Health and Medical Sciences** (45 👁)

**Affirmation** I certify that I am at least 18 years of age; a recent graduate with at least a Bachelor's degree in Bioinformatics, Computational Biology, Information Technology, Computer Information Systems, Computer Science, or a closely-related field of study from an accredited university or college within the last 24 months; a citizen or a Legal Permanent Resident of the United States of America; and not a current employee of EPA ORD or the spouse or child of an EPA ORD employee.

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