

Assistant/Associate/Full Project Scientist - Machine Learning & Data Analytics Advanced Bioimaging Center
Department of Molecular and Cell Biology
University of California Berkeley

Direct Link: <https://www.AcademicKeys.com/r?job=250685>

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Posted Dec. 19, 2024, set to expire Jan. 15, 2025

Job Title Assistant/Associate/Full Project Scientist - Machine Learning & Data Analytics Advanced Bioimaging Center Department of Molecular and Cell Biology

Department

Institution University of California Berkeley
Berkeley, California

Date Posted Dec. 19, 2024

Application Deadline 01/15/2025

Position Start Date Available immediately

Job Categories Research Scientist/Associate

Academic Field(s) Biology - Cell Biology
Biology - Biochemistry

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Job Description

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Assistant/Associate/Full Project Scientist - Machine Learning & Data Analytics Advanced Bioimaging Center Department of Molecular and Cell Biology

Position overview Position title: Project Scientist

Salary range: The UC academic salary scales set the minimum pay determined by rank and step at appointment. See the following table for the current salary scale for this position:

https://www.ucop.edu/academic-personnel-programs/_files/2024-25/july-2024-scales/t37-b.pdf

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. A reasonable estimate for this position is \$180,000 - \$225,000.

Percent time: 100%

Anticipated start: Fall/Winter 2024-2025

Position duration: One year with the possibility of extension based on performance and availability of funding.

Application Window

Open date: November 13, 2024

Next review date: Wednesday, Jan 15, 2025 at 11:59pm (Pacific Time)

Apply by this date to ensure full consideration by the committee.

Final date: Wednesday, Jan 15, 2025 at 11:59pm (Pacific Time)

Applications will continue to be accepted until this date.

Position description

The Advanced Bioimaging Center (ABC) in the Department of Molecular and Cell Biology at the University of California, Berkeley seeks applications for two Project Scientists at the Assistant, Associate, or full rank. The selected candidate will be appointed at the rank to commensurate with prior experience. The position will report to Professor Gokul Upadhyayula, with Professor Eric Betzig serving as an additional academic mentor. The project scientist will make significant and creative contributions in the area of machine learning & data analytics.

The Advanced Bioimaging Center (ABC) at UC Berkeley aspires to be a world-leading multidisciplinary imaging center that drives important biological discoveries through critical new advances in all aspects of imaging technology and that drives the dissemination of that technology through a multi-pronged education strategy to scientists around the world. ABC was intentionally designed to maximize scientific productivity and impact by adopting groundbreaking imaging technologies such as the next-generation adaptive optical multifunctional microscope, incorporating the high-level technical expertise of instrumentation scientists, applied mathematicians, and computational scientists, and building worldwide collaborations aimed at tackling the challenges posed by terabyte and petabyte-scale imaging data processing, visualization, and dissemination. Members of the ABC have access to leading - edge imaging and computing hardware, as well as exposure to collaborators from a range of diverse disciplines, including in the fields of Artificial Intelligence, Data Science, Mathematics, and

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more.

The Assistant/Associate/Full Project Scientists will be an integral part of a visionary scientific team driving cutting-edge biological discoveries through immediate applications of critical advances in imaging technologies. These positions will work with a dedicated team to develop data analytics software in terabyte- to petabyte-scale imaging projects. The incumbents will develop and refine machine learning applications and manage projects and provide regular progress reports to PIs and collaborators.

Successful candidates will be an integral part of the expert team working together with computational scientists and biologists in experimental design to tackle complex biological questions in a quantitative manner. The work will primarily be conducted at the facility in Barker Hall. Occasional travel may be required.

Key Responsibilities

- Make significant and creative contributions to development of new imaging and data processing tools for datasets generated on multicellular tissues, organoids, transparent embryos.
- Design, build, and maintain new software packages for efficient data processing.
- Advise on applications of these tools for biological imaging; collaborate with Postdocs and graduate students on specific projects to test, learn and implement for general and specific use cases.
- General organization and management of software documentation.
- Bring cross disciplinary expertise to solve problems at the intersection between life science, computer vision, and state-of-the-art AI methods.
- Work with petabyte-scale light sheet datasets that are typically 4D or 5D (x,y,z,t,chemistry). Identify and implement scalable solutions to scientific questions on large-scale data sets, especially using performant algorithms.
- Develop machine learning approaches, computer vision tools to help pre-process dataset and annotations to generate groundtruth benchmarks.
- Contribute to dissemination via open source code repositories, demonstrations, publications, presentation.

These positions will be eligible for full benefits.

Lab: <https://abc.berkeley.edu/>

Contract: <https://uaw5810.org/ar-contract-2022/>

Qualifications

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Basic qualifications (required at time of application)

- PhD (or equivalent international degree)

Additional qualifications (required at time of start)

- For the Assistant Project Scientist rank: 4+ years of postdoctoral research experience
- For the Associate Project Scientist rank: 8+ years of post PhD research experience
- For the full Project Scientist rank: 14+ years of post PhD research experience

Preferred qualifications

- PhD or equivalent international degree in Computation Data, Computer Sciences, Bioinformatics or Related field
- Demonstrated record of productivity and publications and/or scholarly contributions
- Strong biological background and understanding of molecular biology
- Demonstrate understanding of optical microscopy, including light sheet microscopy, adaptive optics, and modern scientific cameras
- Demonstrated ability to work in a research team, manage active collaborations with other academic groups
- Demonstrated experience handling and processing large scale imaging datasets (>100TB to petabyte scale and beyond)
- Expertise in programming in C++, Labview, MATLAB, Python
- Expertise in databases, data infrastructure, data governance
- Expertise in high performance computing using SLURM or LSF
- Experience with PyTorch, JAX, or Tensorflow
- Experience with NVIDIA CUDA and related OpenMP programming
- Experience with cloud services (AWS, GCP, Azure, etc)
- Experience with state of the art AI/ML architectures (vision transformers, diffusion models, etc)
- Experience mentoring undergraduate/graduate students, and/or technicians.
- Experience with professional speaking engagements
- Ability to effectively communicate, participate in efficient and open collaboration, and engage with a diverse group of researchers
- The ideal candidate will be innovative and able to synergize various ideas and approaches, while exercising sound judgment to evaluate and take acceptable risks

Application Requirements

Document requirements

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- Curriculum Vitae - Your most recently updated C.V.
- Cover Letter
- Statement of Research - Provide a summary of your major research accomplishments in approximately 250 words. Additionally, please include a brief statement highlighting your experience that is directly relevant to the key responsibilities of this position
- Project Portfolio - Summary portfolio of data and/or AI projects executed, as demonstrated by publications or github contributions
- Statement on Contributions to Diversity, Equity, Inclusion, and Belonging - Statement on your contributions to diversity, equity, inclusion, and belonging in research, teaching, and service, including information about your record of activities to date, and plans for contributing if hired at UC Berkeley. [More Information and guidelines.](#)

Reference requirements

- 3-5 required (contact information only)

Apply link: <https://aprecruit.berkeley.edu/JPF04705>

Help contact: harrisonmd@berkeley.edu

About UC Berkeley

UC Berkeley is committed to diversity, equity, inclusion, and belonging. The excellence of the institution requires an environment in which the diverse community of faculty, students, and staff are welcome and included. Successful candidates will demonstrate knowledge and skill related to ensuring equity and inclusion in the activities of their academic position (e.g., teaching, research, and service, as applicable).

The University of California, Berkeley is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, age, or protected veteran status.

Please refer to the [University of California's Affirmative Action Policy](#) and the [University of California's Anti-Discrimination Policy](#).

In searches when letters of reference are required all letters will be treated as confidential per University of California policy and California state law. Please refer potential referees, including when letters are provided via a third party (i.e., dossier service or career center), to the [UC Berkeley statement of confidentiality](#)

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prior to submitting their letter.

As a University employee, you will be required to comply with all applicable University policies and/or collective bargaining agreements, as may be amended from time to time. Federal, state, or local government directives may impose additional requirements.

Job location

Berkeley, CA

To apply, visit <https://aprecruit.berkeley.edu/JPF04705>

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact

N/A

University of California Berkeley

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