Research Scientist, Advanced Computer Vision and Analytics for Inflammatory Bowel Disease

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About the School

The University of Virginia School of Data Science-the first of its kind in the nation-advances discovery, innovation, and societal impact through collaborative, open, and responsible data science research and education. Founded in 2019, the School brings together expertise across business, computation, engineering, humanities, law, mathematics, social sciences, statistics, and law to address complex, real-world challenges. Its academic offerings include a B.S. in Data Science, an undergraduate minor, residential and online M.S. in Data Science programs, and a Ph.D. in Data Science, all designed to prepare students for a rapidly evolving data-driven world.

About the Position

The University of Virginia School of Data Science invites highly motivated and qualified applicants to apply for our Research Scientist position. We are seeking individuals passionate about leveraging cutting-edge data science methods, including machine learning, computer vision, and deep learning to revolutionize our understanding of inflammatory bowel disease (IBD). Successful candidates will help research and develop state-of-the-art molecular and data science techniques to characterize the metabolic shifts, genetic signatures, and tissue features associated with inflammatory bowel disease subtypes. This position will report to Donald E. Brown and collaborate closely with a world-renowned multidisciplinary team in IBD research.

Key Responsibilities

- Conduct supervised and independent research applying computational and engineering principles to challenges in IBD.
- Develop, implement, and test novel algorithms, models, and machine learning methodologies.
- Analyze complex, high-dimensional physiological and clinical data.
- Contribute to the design and execution of clinical research protocols.
- Prepare high-impact manuscripts for peer-reviewed publication and present findings at national/international scientific conferences.
- Collaborate effectively within a multidisciplinary team environment.
- There are no direct patient care responsibilities; however, the role involves close interaction with clinical data and collaborators within the UVA and Duke Schools of Medicine.

Minimum Qualifications

- Doctoral degree (PhD or equivalent) in Data Science, Engineering (Systems, Biomedical, Electrical, Mechanical, Chemical), Applied Mathematics, Computer Science, Physics, or a related quantitative field, completed at the time of hire.
- Strong publication record commensurate with experience, demonstrating original research contributions.

Preferred Qualifications

- Demonstrated expertise in one or more of the following:
- Computer vision - deep learning methods to improve interpretation and understanding of high-resolution medical imagery.
- Feature engineering - feature extraction from physiological signals.
- Machine Learning / AI: Supervised/unsupervised learning, deep learning, reinforcement learning, learning-based control, model validation.
- Proficiency in programming languages commonly used in research (e.g., Python).
- Experience with physiological modeling.
- Experience in analyzing real-world physiological data from imagery and genetic signatures.
- Excellent analytical, problem-solving, critical thinking, and communication (written and oral) skills.
- Ability to work independently and collaboratively in a dynamic research environment.

Position Details

This is a full-time, exempt level, benefitted restricted position at the School of Data Science at the University of Virginia in Charlottesville, VA. This position is dependent upon project need, availability of funding, and continued satisfactory performance.

Anticipated Salary: $110,000

Anticipated Start Date: April 2026

Health and Other Benefits (visit Health and Other Benefits for additional information)

- **UVA Health Plan:** the choice between 3 different health plans
- **Vision Coverage**
- **Dental Plan**
- **Benefit Savings Plans**
- **Life Insurance**
- **Disability Benefits**
- **Paid Time Off:** starting with 22 days of time off per year, 12 or more holidays, 8 weeks parental leave

Education Benefits (visit Education Benefits for additional information) After six months of employment, full-time and part-time (20+ hours) employees in a benefits-eligible position are offered options of:

- Use of up to $5250 per calendar year towards a for-credit degree program or for-credit certificate program
- Use of up to $2000 of the total $5250 noted above per calendar year for professional development including job-related training, conferences, and initial certificate exams.

Applicants must be currently authorized to work in the United States. For this role, the University will not sponsor or consider candidates requiring sponsorship for employment visas now or in the future.

Please apply online, and search for **R0081449**. Complete an application online with the following documents:

- Resume
- Cover letter

Upload all materials into the resume submission field; multiple documents can be submitted into this one field. Alternatively, merge all documents into one PDF for submission. Applications that do not contain all required documents will not receive full consideration.

Internal applicants: Search and apply for jobs on the UVA Internal Careers website.

References will be completed via direct reach. Please plan to provide at least three references when applying.

A background check is required and will be conducted per university policy prior to the first day of employment.

For questions about the position, contact Don Brown, Quantitative Foundation Distinguished Professor of Data Science, at deb@virginia.edu.

For questions about the application process, please contact Daniel Strong, Senior Human Resources Recruiter, at das6zb@virginia.edu.

For more information about UVA and the Charlottesville community, please see www.virginia.edu/life/charlottesville and https://embarkcva.com/.

The University of Virginia is an equal opportunity employer. All interested persons are encouraged to apply, including veterans and individuals with disabilities.

MINIMUM REQUIREMENTS

Education: Requires a doctoral degree or master's degree with significant experience.
Experience: None
Licensure: None

PHYSICAL DEMANDS

This is primarily a sedentary job involving extensive use of desktop computers. The job does occasionally require traveling some distance to attend meetings, and programs.

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