



Department of
Animal & Dairy Sciences
UNIVERSITY OF WISCONSIN-MADISON

POSTDOCTORAL RESEARCH ASSOCIATE POSITION

Department of Animal and Dairy Sciences University of Wisconsin-Madison

Position Title: Postdoctoral Research Associate

Start Date: As soon as possible after 1 November 2021

The University of Wisconsin-Madison *Dairy Brain* project invites applicants for a full-time Postdoctoral Research Associate position. The position has funding from the US Department of Agriculture until June 30, 2023. Additional funding is possible, but contingent upon successful grant applications. We are looking for a mature, independent, motivated, innovative, highly analytical, and collegial professional to join a multidisciplinary team (dairy science, computer science, and data management) for an exciting project about developing and applying dairy farm simulation modeling, artificial intelligence algorithms, expert systems, optimization algorithms, decision-making tools, and data management and integration techniques applied to dairy farm data streams: i.e., support the development of what we call the *Dairy Brain*: <https://DairyBrain.wisc.edu>.

RESPONSIBILITIES: The successful candidate will be in charge of performing research on the interaction of simulation, optimization techniques, expert systems and artificial intelligence as well as development of decision support tools, with the main aim of improving dairy farm management and decision making processes. The candidate will contribute to dairy farm data management and integration prior to be used in the development of decision support tools. The individual will work on the inception, development, and deployment of decision support tools. The individual will serve as a liaison among project's graduate students, project's faculty team in the departments of Dairy Science and Computer Science and will interact with the dairy farm management team on a permanent basis as well as with industry professionals. The successful candidate is expected to support the development of an internationally recognized research and outreach program in dairy farm decision making and management using constant data flow streams conducive to high quality scientific publications and computerized decision support tools for practical use on dairy farms. The candidate will have the opportunity to collaborate and participate in the outreach and extension components of the project, namely the Dairy Brain Coordinated Innovation Network and Data Money Extension program, which both have intense interactions with US dairy professionals (professors, researchers, constants, etc.) and Wisconsin dairy farmers.

MINIMUM QUALIFICATIONS: A Doctorate Degree in Animal or Dairy Science, Computer Science, or a closely related field, with strong data analysis and computer simulation emphasis, completed by the first day of employment. The selected individual must have the ability to work in a multidisciplinary team environment and have good leadership skills.

PREFERRED QUALIFICATIONS: Ability to communicate effectively with diverse audiences; Strong organizational, time management and interpersonal skills; Experience in data science and web-based

applications; Experience with research in the area of dairy farm (or related) management and decision-making; Experience publishing in peer reviewed journals and scientific meetings; Familiarity with Python, R or Julia, SQL (postgres) and related code programming environments as well as artificial intelligence algorithms; Experience with more advanced data manipulation and cleaning technologies (entity matching/SQL joins and debugging those processes); Experience with data visualization tools (Power BI, Tableau, etc.) and data storytelling.

UNIVERSITY/COMMUNITY: The University of Wisconsin-Madison is a top U.S. research institution, and the Animal and Dairy Sciences at UW-Madison is a World-Class department highly regarded for research, extension, and instruction. Wisconsin is the largest dairy farm state with 7,000 farms, in which dairying contributes half of the agricultural economy, has an impact of \$43 billion a year, and supports 80,000 jobs.

APPLICATION DEADLINE: Position is open until filled and full consideration will be given as soon as an application is received. Salary will be commensurate with qualifications and experience.

APPLICATION PROCESS: To apply, please send an email to Victor E. Cabrera victor.cabrera@wisc.edu with a single attachment. This attachment must include: Cover letter arguing candidate's professional match with position and possible project's contributions; Curriculum Vitae; Reference page with the contact information for three professional references. Any offer of employment is contingent on the University of Wisconsin-Madison's verification of credentials and other information required by law and/or university policies, including but not limited to a criminal background check.