Postdoctoral Engineer in Agrifood Technology

We are seeking highly motivated postdoctoral scholars for two-year positions to lead research on agrifood technology engineering and innovation. VISTA F3, an emerging research center at UC Merced, is advancing the Economic Development Administration’s Build Back Better Regional Challenge for the San Joaquin Valley. A key research and development activity will be the advancement of transdisciplinary research that works with community advisors and industry partners in use-inspired research and development with commercial application in the emerging agrifood technology and engineering sector. The post-doctoral scholars, emerging leaders in agrifood technology with background in artificial intelligence, computer vision, remote sensing, mechatronics or related subdiscipline, will play a crucial role in the development and commercialization of use-inspired agrifood technology for the benefit of underserved communities supported by the agricultural economy in the San Joaquin Valley region.

These scholars will have the opportunity with a cohort of other scholars funded by the USDA NIFA SAS Securing a Climate Resilient Water Future for Agriculture and Ecosystems through Innovation in Measurement, Management, and Markets (SecureWaterFuture.net), the USDA NIFA AI Institute for Transforming Workforce and Decision Support (AgAID.org), and the NSF Internet-of-Things for Agriculture (IoT4ag.us). As such, the successful candidates will work with a diverse team of leading scientists at UC Merced, and their collaborators in California (UC Berkeley, UC Davis, UC Agriculture & Natural Resources), Washington State University, Oregon State University, University of Pennsylvania, Purdue University, University of Florida, University of Virginia, as well as industry partners.

Responsibilities of these positions will include conducting original research that integrates technoeconomic and innovation aspects of agrifood technology in addition to use-inspired research in any of the following areas:

• Inclusive Innovation and Entrepreneurship in Agrifood Tech; Small Farmer Tech Solutions; Convergent approaches to Equitable Food-Energy-Water Solutions; Societal Resilience in Agrifood Tech Innovation

• Climate Resilience and Regenerative Agriculture; Ecosystem Service Quantification (e.g., carbon / nitrogen accounting, water quality remediation); Geospatial Mapping, Analysis and Modeling for precision applications; Water Information and Accounting (e.g., ET, irrigation, groundwater recharge); Food-Energy-Water Systems (e.g., agrivoltaics, vertical farming);

• Artificial Intelligence, Machine Learning, and/or Data Science applications; Automation, Cyberphysical Systems, Robotics, and Mechatronics; Internet-of-Things, Edge Computing, Human-Computer Interaction; Technology Stack Systems Integration; Digital Twins; Biological and Chemical Sensor Systems with applications in environmental sensing, agriculture, food production and quality control.

The incumbents will be responsible for:

• Leading use-inspired research and development of agrifood technology in collaboration with local practitioners and community advisors
• Working with regional industry partners to co-create and commercialize agrifood technology that
meets the needs of underserved communities

- Utilizing expertise in AI, computer vision, mechatronics, remote sensing, and robotics to bring the technology to market
- Mentoring junior engineers and participate in the training and development of the next generation of agrifood technology leaders
- Conducting market analysis and product development to ensure commercial viability and meet the needs of underserved communities
- Collaborating with interdisciplinary teams of researchers, industry partners, and community organizations to promote inclusive innovation and sustainable economic growth