



*Twin Cities Campus*

*Department of Soil, Water, and Climate  
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## **Graduate Research Assistantship Position at the University of Minnesota**

Applicants are solicited for a M.S./Ph.D. student to support a Variable Rate Nitrogen (N) and Variable Rate Irrigation research project in corn led by Dr. Vasu Sharma (<https://swac.umn.edu/people/vasudha-sharma>) and Dr. Yuxin Miao (<https://swac.umn.edu/people/yuxin-miao>). The research will be focused on applications of proximal, UAV and satellite remote sensing, crop growth modeling and machine learning for crop N and water stress diagnosis and precision irrigation and nutrient management.

### **Period:**

Position start date - spring or summer 2023

### **Expected salary:**

\$26,340 for stipend per year, plus \$22,809 for tuition and health insurance

### **Required Qualifications:**

- A M.S. or B.S. degree in Agronomy, Soil Science, Agricultural or Biosystems Engineering;
- Experience and proficiency in GIS, remote sensing image analysis, image processing and analysis, proximal and remote sensing for crop and soil mapping;
- Experience with irrigation and nitrogen management.

### **Preferred qualifications:**

- Experience with machine learning analysis, with demonstrated programming skills in Python and/or R;
- Being able to work independently and as well as collectively in an international and interdisciplinary research team;
- Strong communication skills;
- Experience in crop growth modeling is a plus;
- Experience in thermal remote sensing and data analysis is a plus.

### **Application contact information:**

- Dr. Vasu Sharma; Assistant Extension Professor ([vasudha@umn.edu](mailto:vasudha@umn.edu)).
- Dr. Yuxin Miao, Associate Professor and Associate Director of Precision Agriculture Center ([ymiao@umn.edu](mailto:ymiao@umn.edu))

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