

Ladner Research Group

PI: David A. Ladner

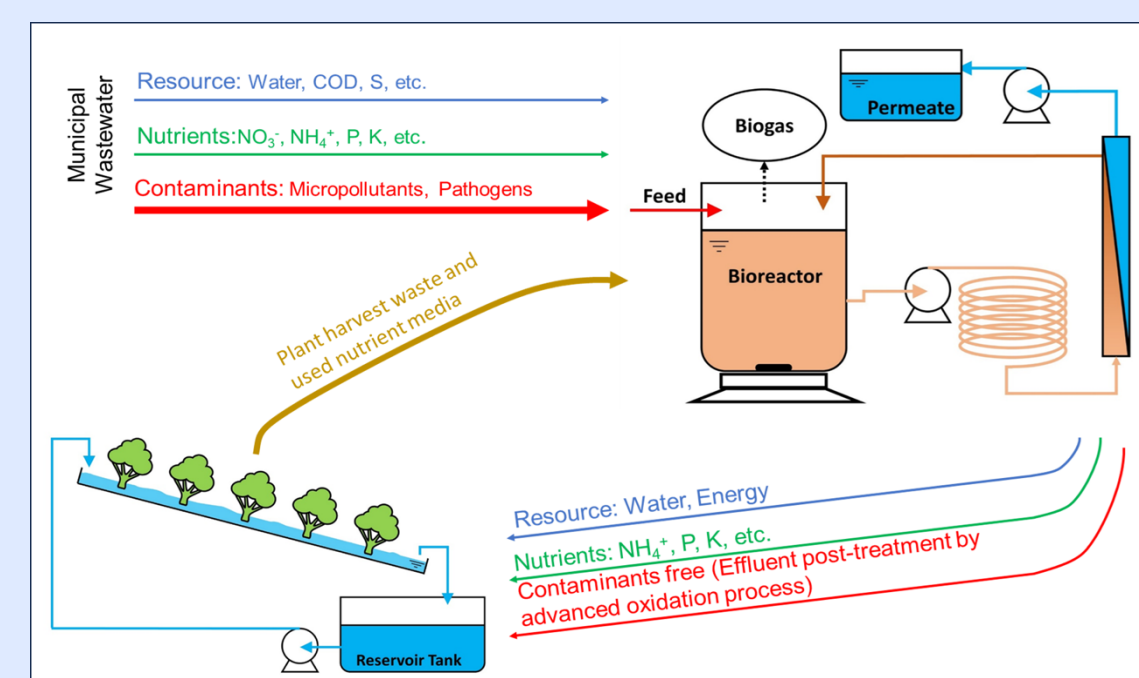
Department: Environmental Engineering and Earth Sciences



School of
**CIVIL AND ENVIRONMENTAL
ENGINEERING AND EARTH SCIENCES**

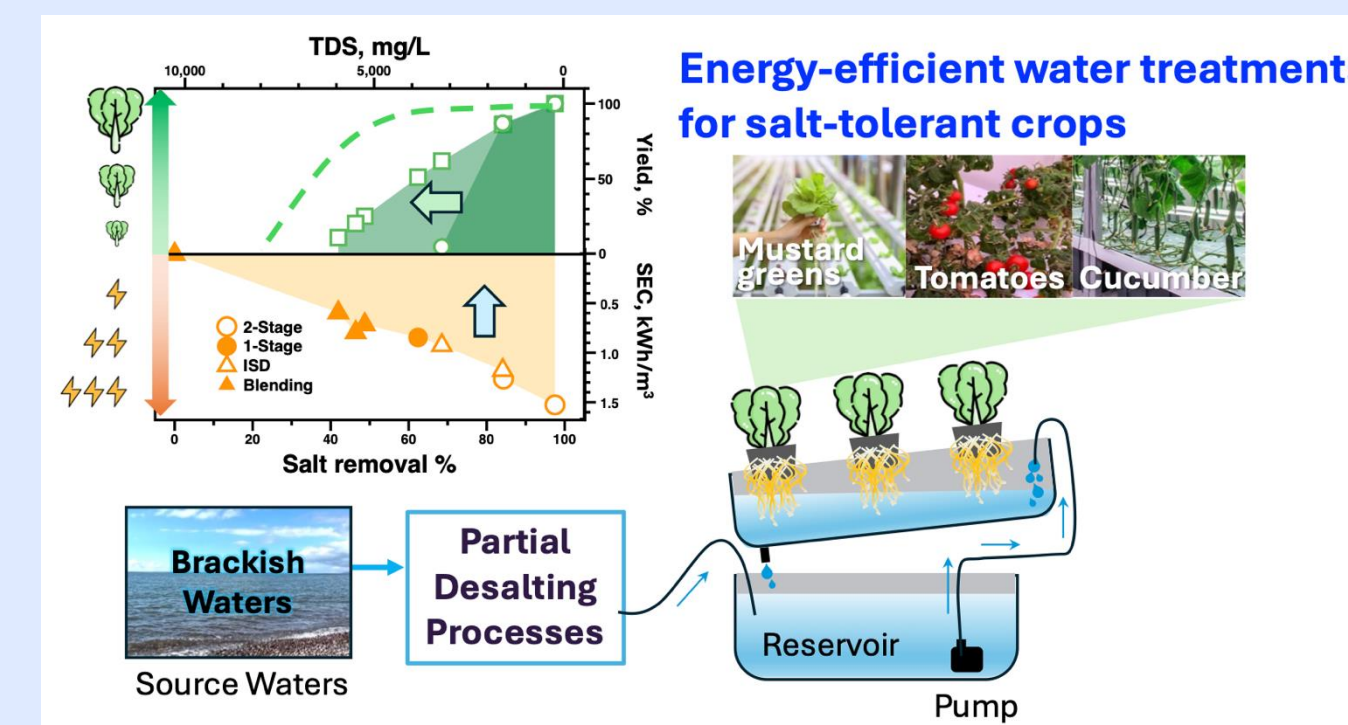
RESEARCH GROUP FOCUS

- Partial desalination of saline and brackish waters using nanofiltration (NF) and electro dialysis (ED) technologies for salt-tolerant crop cultivation.
- Anaerobic membrane bioreactor-ultraviolet (AnMBR-UV) process tailored to the needs of crops in hydroponic controlled environment agriculture (CEA).

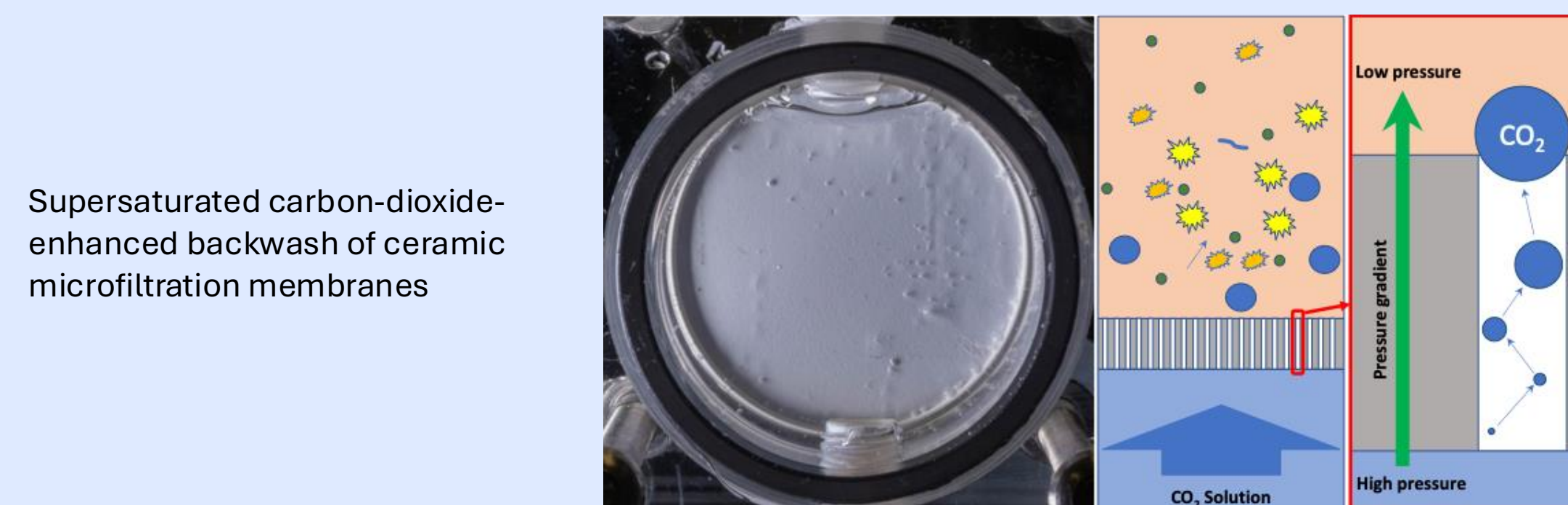


- Community water and wastewater treatment resilience and sustainability.
- Energy assessments for industrial processes.
- Ambient water quality and citizen science through Adopt-a-Stream.

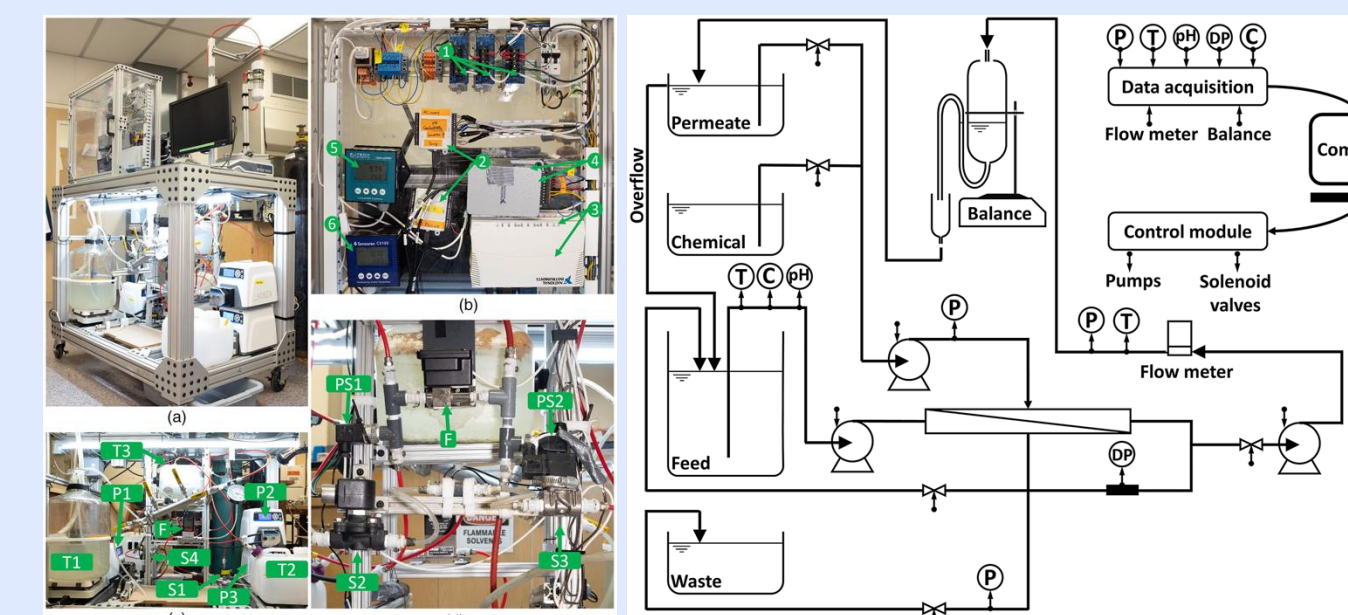
RESEARCH HIGHLIGHTS



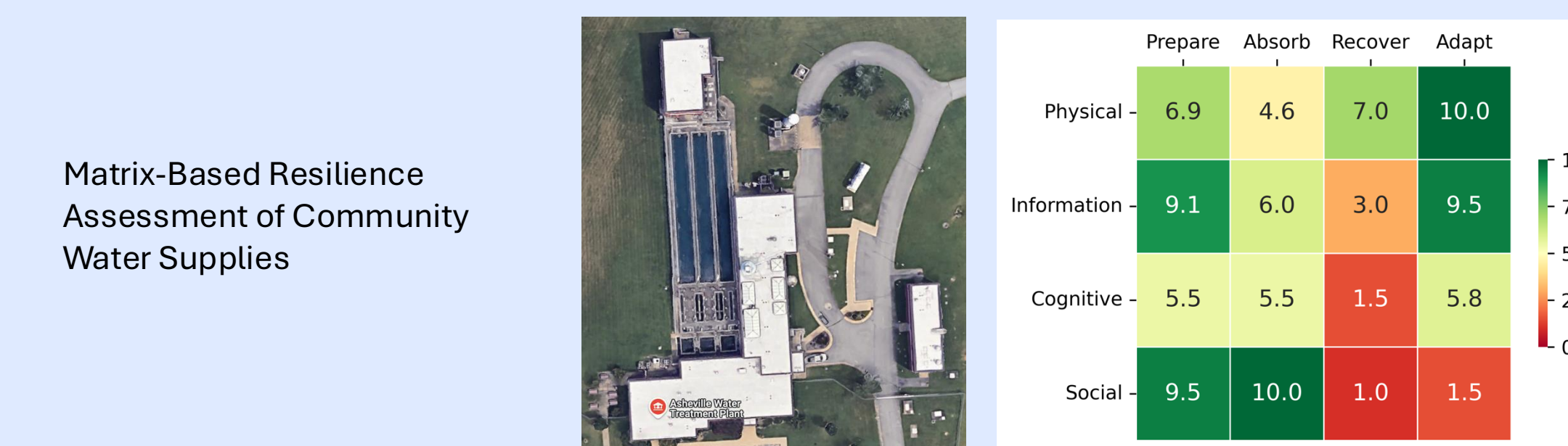
Partial Desalination: A new paradigm for cultivation of salt-tolerant food crops in controlled environment agriculture using brackish waters



Supersaturated carbon-dioxide-enhanced backwash of ceramic microfiltration membranes

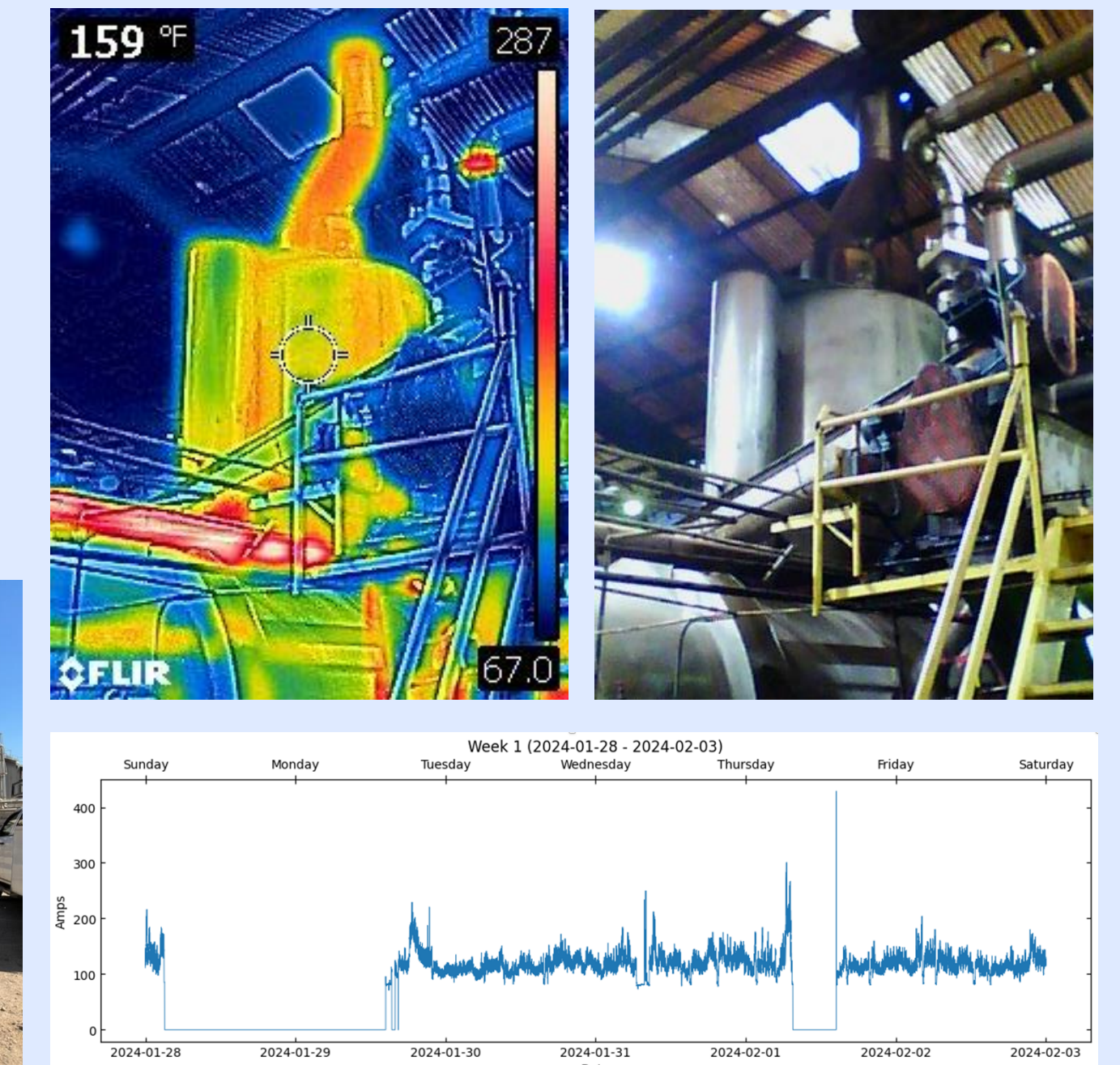


Automated testing apparatus for ceramic membrane filtration of high-strength industrial wastewater



Matrix-Based Resilience Assessment of Community Water Supplies

Energy and carbon footprint for animal rendering operations



TAGS & COLLABORATIONS

- Membrane-based Water Treatment
- Surface and colloid science
- Fouling reduction
- Water Treatment Resiliency

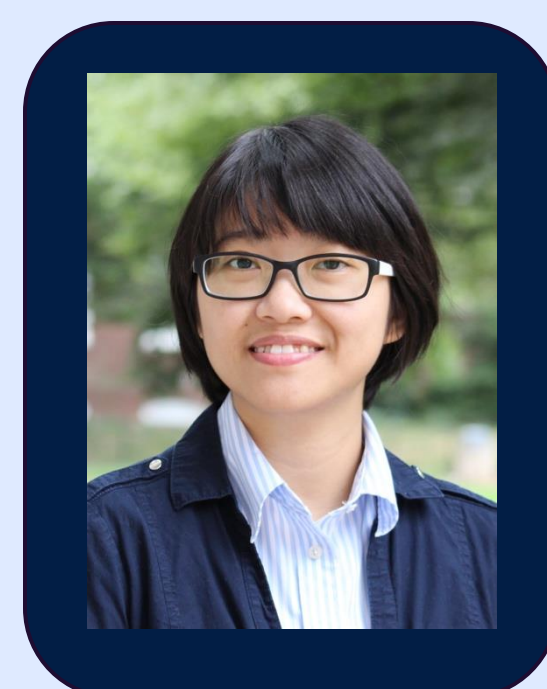
WE ARE INTERESTED IN COLLABORATORS WHO:

Work on infrastructure, social science, resilience, computational modeling, data science, etc. We need folks who can provide fundamental insight into what we do, as well as folks who can help us scale up and apply our work in the real world.

LAB MEMBERS & CONTACT INFORMATION



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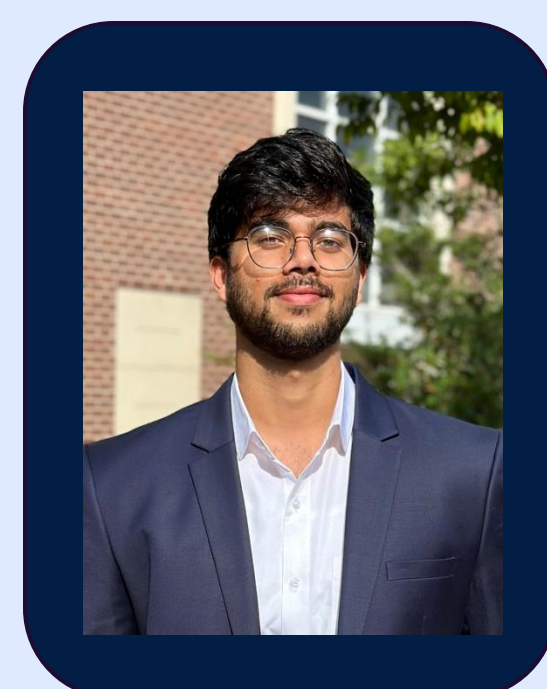
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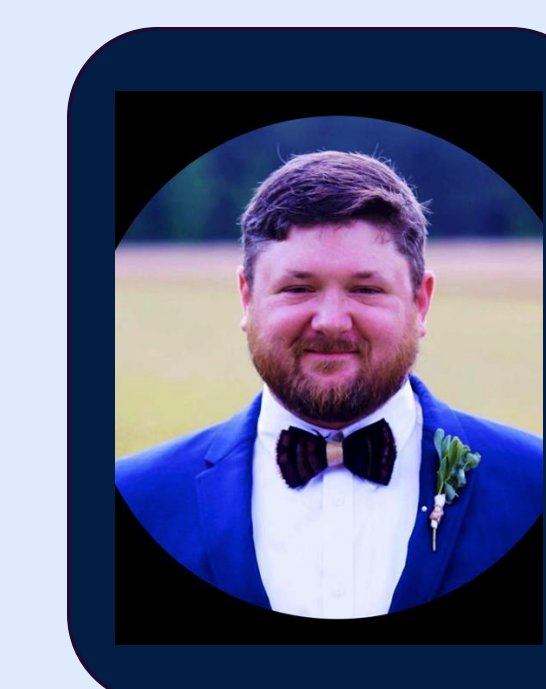
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