Virginia Tech

Solving Problems with Data Science at Virginia Tech

Summer REU 2024

Data Sciences Project:

Automated Turfgrass Pest Mapping using Aerial Image Analysis (McCall Lab)

Project Description:

Accurate spatial assessment of plant pest outbreaks can lead to precision management and improve our understanding of epidemics. Students will create algorithms for isolating turfgrass stressors from drone imagery to map pest outbreaks using geographic information systems (GIS) software. Geospatial analysis will be used to integrate with GPS sprayer technologies for real-world targeted chemical applications to reduce inputs across recreational greenspaces.

Expected Qualifications of Students:

Students are expected to have a basic understanding of computer coding and GIS applications. Experience with plant biology and/or machine learning methods desired.

Faculty Bio:

Dr. David McCall is an assistant professor in the College of Agriculture and Life Sciences at Virginia Tech. He received his M.S. and Ph.D. from Virginia Tech in plant pathology.

Website: https://spes.vt.edu/faculty-staff/faculty/mccall-david.html | Twitter: @VTTurfPath