

Solving Problems with Data Science at Virginia Tech

Summer REU 2022

Data Sciences Project:

Autonomous systems for specialty crops load, canopy, and disease estimations-
intellegnet Automation and Control Technologies (iACT) Lab

Project Description:

Specialty crops including fruits, vegetables, and horticulture crops are high value products. The production of these crops is labor-intensive and sometimes with a constrained time window, such as harvesting ripe fruits and spraying diseased areas. Students will work to develop various IoT systems (consisting of mobile and stationary nodes), and will collect crop and environmental data. The collected data will be processed and analyzed to identifying robotic strategies and data-driven decision support systems for specialty crop production operations and disease management.

Expected Qualifications of Students:

Students expected to be from STEM majors and desire to solve agricultural problems. Familiarity with microcontrollers, computer vision, or data analytics is preferred.

Faculty Bio:

Dr. Hasan Seyyedhasani is an assistant professor in the College of Agriculture and Life Sciences at Virginia Tech. He has an M.S. in Mechanics of Agricultural Machinery and in Electrical and Computer Engineering; and a Ph.D. in Biosystems and Agricultural Engineering. He has worked in John Deere Company; and have been postdoc in ag robotics and automation in the University of California, Davis, and in the University of Wisconsin, Madison.

