HANDS-ON MINDS-ON INDUSTRIAL PRACTICES

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Presentation Title: Exploring AI in Advanced Manufacturing through Hands-on Problem-based Learning: A Summer Residential Program for Rural Middle School Students

This presentation will discuss a summer residential program at N.C. State University for underrepresented rural middle school students (grades 6-8) that allowed them to explore advanced manufacturing through the lens of artificial intelligence. In this NSF-funded project, students engaged in hands-on, project-based learning activities focused on AI-driven applications and processes used in pharmaceutical, food processing and energy systems industries. Presenters will model and discuss classroom deliverables (lesson plans), AI hands-on PBL activities, and share lessons learned and best practices from the summer experience. Attendees will be provided with a one-page "How to teach AI in the context of Advanced Manufacturing" handout.

Presentation Target:

Middle School

Presenter(s):

1. Donald McCoy, STEM Outreach Consultant, North Carolina State University
2. Anthony Bowser, Program Coordinator, North Carolina State University
3. Tameshia Baldwin, Assistant Teaching Professor, North Carolina State University College of Engineering