



An NSF EPSCoR Track-2 RII Program

Highlight of Education and Workforce Development by AI SUSTEIN team

Background

AI SUSTEIN's overall Education/Workforce Development Theme (EWDT) is to be a crucial source of information and resources for AI and Big Data Analytics, as well as create the future AI knowledgeable diverse workforce. To accomplish this, there are two main goals that need to be accomplished. Those being 1) Mentor and Support the early-career faculty and provide research training to minority students, and 2) Develop technical assistance for industry and AI related associate degree and minor programs at participating institutions. The goals are further broken down into objectives, which are even further broke down into different activities. Each year in the AI SUSTEIN program has a different set of objectives and activities with the same overarching goals, this being year 1. For this particular case study, the focus will be on the research training given to undergraduate students and the AI minors that have been developed at the participating universities.

Research Experience for Undergraduates (REU)

Regarding the research training for the undergraduate students, during the year of 2022 we created the REU program which we are offering during the summer. Recruitment for the summer of 2022 started in January via email, flyers, the NFS ETAP site (Opportunity 177: <https://www.nsfetap.org/award/177/opportunity/177>), and different professional organizations and student chapters including the National Society of Black Engineers (NSBE), American Indian Science and Engineering Society (AISES), Society of Hispanic Professional Engineers (SHPE), and Society of Women Engineers (SWE) for a total of 30 applicants. Out of the 30 applicants we were able to recruit our goal of 8 students, as seen in Figure 1 to the right. The REU program started on June 9th, 2022, and will end August 5th, 2022, for a total of 8 weeks of training. During these 8 weeks, the students will go through different training, workshops and can attend any of the weekly workshops or events created to assist them and their future. Throughout this program students will be mentored in the most deficient areas for most undergraduates, problem solving and critical thinking. Lastly, students will display an end-of-program poster to showcase all that they have learned and accomplished.



Figure 1 - Summer 2022 SI SUSTEIN REU Students

AI Minors

Concerning the AI minors that the participating universities are to develop, so far, each institution has created something new for their students to be offered in the years to come. NDSU has developed an 18-credit minor for those with a background in programming. UARK has an existing minor already but has developed a 15 credit AI minor geared towards engineering students. UNLV has developed an 18-credit AI minor for non-computer science majors, with a new course focused on AI theory. NDSU has also created an economic computation certificate that is 12 credits and will help students become an expert in economic computation. Upon approval, these minors should expect to be offered in the coming years.