AI for Social Good

Artificial Intelligence has become a ubiquitous part of our daily lives, and this rise in AI applications has stimulated significant interest from the public, media and policy makers. This increasing attention is often focused on the negative consequences of AI, sometimes overlooking the societal benefits that AI can deliver. The hackathon focused on “AI for social good” is focused on how AI can help solve difficult societal challenges by assisting low resource communities, accelerating the delivery of education, improving public health and welfare, ensuring public safety and security, as well as assisting conservation efforts.

## **Theme: Education**

In India, 13 out of every 100 Indians between 5-29 years did not attend school or dropped out because they did not consider education “necessary” or because they had to supplement household income (District Information System for Education (DISE)). Over the past few years, several school districts in India have been collaborating with academics and researchers to develop AI based systems to help them identify at-risk students who are unlikely to finish high school on time. Also, how do we help Job Training and Skills Development programs to figure out what skills are going to be in demand in the future so they can train individuals and help them become employable.

## **Theme: Healthcare**

The grand challenge for AI in health is to develop learning healthcare systems. These systems need to be sustainable such that they can observe all the available data about a person, build appropriate models from the observations, and help make the right decisions to provide the right interventions and care when the person needs it. True learning systems re-capture the results of the intervention and learn and adapt from the feedback.

## **Theme: Agriculture**

India is characterized by small farms. [More than 80% of total land holdings](http://agricoop.nic.in/sia111213312.pdf) in the country are less than 2 ha (5 acres). Most crops are rain fed, with only about 45% of the land irrigated. According to some estimates, around 55% of total population of India depends on farming. Because of poor availability of funds, farm inputs, poor support price structure for the produce and almost no farm insurance, most of the farming is non-remunerative.

Digital technologies and innovations can play a transformational role in providing new solutions to improve farming productivity and farmer’s net income. Indian agriculture can greatly benefit from the innovative AI solutions across farm, post farm, processing, market and logistics legs of the value chain. Precision agriculture using AI analytics can not only increase economic returns, but also address reducing the energy input and the environmental impact of agriculture.

## **Theme: Transportation**

Intelligent transportation networks can use AI technology to improve mobility and safety. Traffic congestion is also responsible for putting an additional CO2 annually into the atmosphere. A major cause of this congestion is poorly timed traffic signals. The vast majority of traffic signals run “fixed timing” plans, which are pre-programmed to optimize for average conditions observed at a particular snapshot in time and never change. These plans regularly perform sub-optimally since actual traffic flows are frequently quite different than average conditions, and they quickly become outdated over time as traffic flow patterns evolve.

## **Theme: Sustainability**

Sustainability can be interpreted narrowly as the conservation of endangered species and the sustainable management of ecosystems. It can also be interpreted broadly to include all aspects of sustainable biological, economic, and social systems that support human well-being.