

Statement of Purpose

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I want to pursue a Ph.D. in Computer Engineering, and my career aspiration is to work in computer science research stream to make a significant contribution to the agriculture sector in india . My research interest includes artificial intelligence in agriculture, machine learning, digital image processing & High performance computing.

My Primary Interests

My topic of interest is **“Artificial Intelligence in Context Based Farming in Rural Part of India”**. Agriculture plays a vital role in India’s economy. Essentially, AI in agriculture is segmented into robotics, soil & crop management and is designed to make farming easier, more accurate, more profitable, and more productive for the farmer. It is estimated that AI and connected farm services can impact 70 million Indian farmers by 2020, thereby increase in farmer’s income. Furthermore, issues such as population growth, climate change, and food security demand innovative ways to improve crop yield. Therefore, understanding the use of AI in agriculture becomes compelling. The world needs to produce 50% more food by 2050. However, only 4% of additional land will come under cultivation to meet this demand. AI holds the promise of driving an agricultural revolution at a time when the world must produce more food using fewer resources.

The context of any crop is highly dependent on the local environment. It may change invariably from location to location. Even atmospheric conditions also drastically changes from one location to other. I am aiming to carry the research in the field of agriculture sector of rural India. Now day’s farmers in India are facing lot of problems like drastic climate change which affect the yield of the crops due to the inception the diseases. I want work on this area where we can make use artificial intelligence with the help of IoT devices & wireless sensors network to collect the on field data through IoT cloud and provide the farmers with statistical info and some useful patterns. It is very much difficult for the farmer to continuously monitor the various contexts of crop like:

- a. Temperature
- b. Soil moisture
- c. Humidity
- d. Average rainfall etc.

These factors affect the yield of the crop. An artificial intelligence along with IoT devices & WSN will definitely help to improve the crop performance. I want to perform a novel research which will help the farmers in rural part of India to a decision making regarding the drastic change in the environment. So the farmers will able to apply appropriate methods of pesticides spraying and other protective measures.

Conclusion:

I am aware that Kalasalingam University expects high standards from its students. On my part, I can assure you of hard work and sincere efforts. I believe that my enthusiasm will enable me to meet those expectations. My abilities of giving 100 percent towards any work give me confidence to complete the expectations. I am looking forward to a mutual association with Kalasalingam University.

Mr. M.M.Hajare