

ASSIGNMENT 3

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S20180010158
UG4

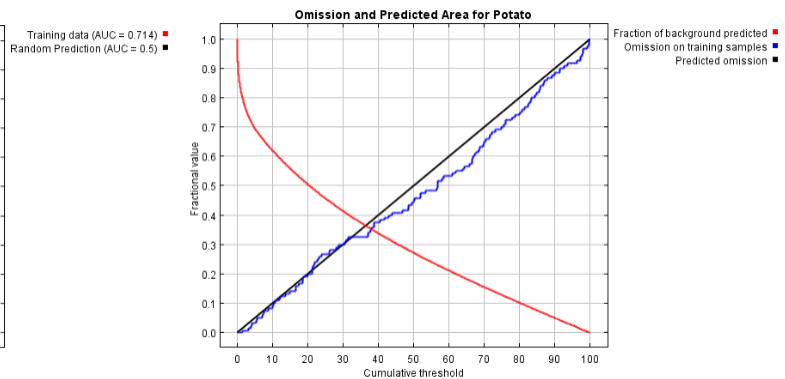
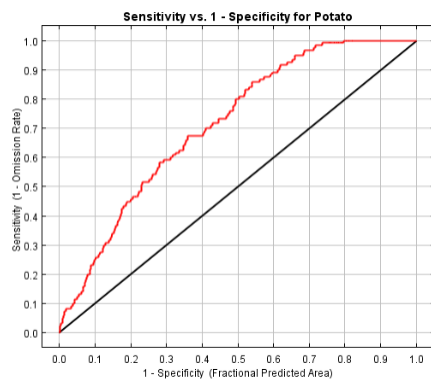
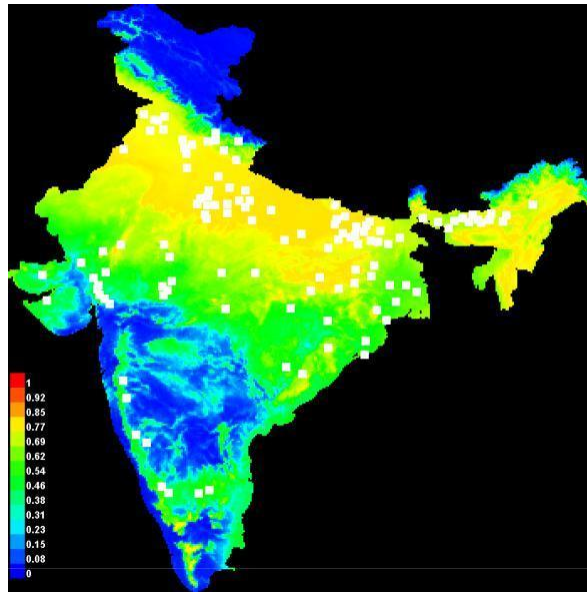
This experiment is conducted to predict the future climate suitability of the crop potato in India.

Potato is a cold season crop that can be grown up to a height of 3,500 ml. The highest average yields are usually obtained where the length of the day is 13 to 17 hours during the growing season. The maximum temperature is 20 to 45 ° C but the respiration rate increases to 30 to 35 ° C. Cold free days and clear skies are essential for growth and development. It has been observed that the determination of CO₂ at 30,000 lux is about half that of 50,000 lux. Therefore, it is not advisable to break the black cotton soil. Cottonseed soil with red and litter is ideally suited for potato cultivation.

The MaxEnt model is used to predict the future suitability of the crop. The MaxEnt model takes in 2 inputs - Future climate data and the current crop distribution.

Future Climate data :

- GCM : BCC-CSM2-MR
- Year : 2041 - 2060
- RCP8.5
- 2.5 min spatial Resolution



According to the Board, we see that growing potatoes is most suitable in northern India (especially UP and Bihar), while some states in southern India have high growing chances such as Karnataka and Maharashtra.

Observe -

Highly suitable states for cultivation of Potato in 2050:

1. Uttar Pradesh
2. Bihar
3. Jharkhand
4. Haryana
5. Punjab
6. Assam