

Warbixinta Saadaalinta Qiimaha Guryaha

Farah Ahmed

1. Maxaan hirgeliyay? (Implementation Overview)

Mashruucan, waxaan ku dhisay nidaam lagu saadaalinayo qiimaha guryaha anigoo adeegsanaya laba hab oo kala duwan oo ka tirsan barashada mashiinka (Machine Learning): Linear Regression iyo Random Forest Regressor.

Waxaan u maray dhowr tallaabo:

- Xog Diyaarinta: Waxaan u kala saaray xogta laba qaybood: 80% tababar (Training) iyo 20% tijaabo (Testing).
- Linear Regression: Habkan wuxuu isku dayaa inuu helo xariiq toosan oo isku xira sifooyinka guriga (sida baaxadda) iyo qiimaha.
- Random Forest: Habkan wuxuu dhisaa boqolaal geed-go'aameed (Decision Trees) si uu u helo natiijo sax ah.

2. Isbarbardhigga Moodallada (Comparison of Models)

Markii aan tijaabiyay hal guri oo gaar ah si aan u arko saadaasha labada moodal:

- Linear Regression: Wuxuu bixiyay qiimo guud, mararka qaarkoodna wuu ka fogaanayaa qiimaha rasmiga ah haddii gurigu leeyahay sifooyin aan caadi ahayn.
- Random Forest: Wuxuu bixiyay saadaal aad ugu dhow qiimaha rasmiga ah.

Random Forest ayaa bixiyay natiijooyin ka macquulsan, sababtoo ah qiimaha guryaha had iyo kale uma kordho si xariiq toosan ah; waxaa jira saameyno badan oo is-dhexgal ah oo Random Forest uu si fiican u fahmaya.

3. Fahamka Random Forest (Understanding Random Forest)

Waa nidaam ka kooban koox geedo go'aameed ah (Decision Trees) oo iskaashanaya. Halkii hal geed go'aan ka gaari lahaa, waxaa la adeegsadaa boqolaal geed.

Sidee u shaqeeyaa?

- Wuxuu qaataa qaybo kala duwan oo xogta ah.
- Wuxuu dhisaa geedo badan (tusaale 100 geed).
- Ugu dambeyn, wuxuu ka qaataa celceliska dhammaan saadaasha geedaha si loo yareeyo khaladka.

4. Falanqaynta Natijjada (Metrics Discussion)

Random Forest ayaa ka fiicnaaday dhinac walba, isagoo helay dhibco sare oo R^2 ah iyo khaladaad yar (MAE iyo RMSE).

Linear Regression waa degdeg oo fudud, balse wuxuu u maleeyaa in xiriirku yahay mid toosan. Random Forest waa mid sax ah laakiin ka culus xagga xisaabinta.

5. Gabagabada iyo Dookhayga (Findings)

Waxaan doorbidi lahaa inaan isticmaalo Random Forest marka la saadaalinayo qiimaha guryaha. Qiimaha dhulku maaha mid si toos ah u kordha; wuxuu u baahan yahay nidaam fahmi kara isbeddelada adag. Random Forest wuxuu naga caawinayaa inaan helno saadaal lagu kalsoonaan karo oo aan si weyn u qaldamin.