



Developing Classifiers through Machine Learning Algorithms for Student Placement Prediction Based on Academic Performance

*Prof. Ms Ganga B M^{*1}, Mr. Shivabasayya B Hiremath^{*2}, Mr. Prasad V^{*3}, Mr. Sagar B^{*4}, Mr. Supreeth S^{*5}*

^{*1,2,3,4,5} VTU, CSE, ACS College of Engineering, Bengaluru, Karnataka, India

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ABSTRACT

In the time of globalization, understudy arrangement is exceptionally difficult issue for every single instructive establishment. For designing organizations, situation is a critical component to keep up with great positioning in the college as well as in other public and worldwide positioning offices. In this paper, we have proposed a couple of managed AI classifiers which might be utilized to foresee the position of an understudy in the IT business in view of their scholastic execution in class 10th, Twelve, Graduation, and Accumulation till date in Graduation. We additionally think about the aftereffects of different proposed classifiers. Different boundaries used to think about and dissect the aftereffects of various created classifiers are precision score, rate exactness score, disarray network, heatmap, and arrangement report. Arrangement report produced by created classifiers comprises of boundaries accuracy, review, f1-score, and backing. The order calculations Support Vector Machine, Gaussian Innocent Bayes, K-Closest Neighbor, Arbitrary Woodland, Choice Tree, Stochastic Angle Plunge, Strategic Relapse, and Brain Organization are utilized to foster the classifiers. Every one of the created classifiers are too tried on new information which are barred from the dataset utilized in the trial.

Keywords: component, formatting, style, styling, insert (Placement, AIML, Campus Prediction)

I. INTRODUCTION

Position is a conclusive element of effective finish of any coursework at the alumni or postgraduate level. It is a fantasy of each and every understudy to get placed in top MNCs to accomplish their put forth objectives and targets. Planning to put the most extreme number of understudies, the colleges and establishments are stepping up their game by preparing and overhauling their understudies through preparing and position cells. AI is the study of getting PCs to learn, without being expressly modified. Each time you really want your email and a spam channel saves you from being required to swim through lots of spams, once more, that is on the grounds that your PC has figured out how to recognize spam from nonspam email. As indicated by the Samuel "The field of study that gives PC the capacity to learn without being unequivocally customized". This is a more seasoned meaning of AI. Other definition is given by Tom Mitchell "A PC program is said to gain as a matter of fact E regarding some class of undertakings T and execution measure P, assuming it's exhibition at task in T, as estimated by P, improves with experience E".

II. METHODOLOGY

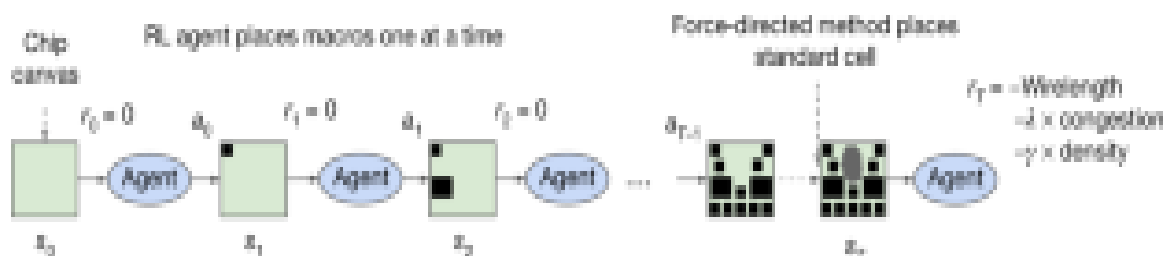


Fig. 1: Overview of our method and training regimen.

DATA MINING PROCESS

Knowing the factors for placement of student can help the teachers and administrators to take necessary actions so that the success percentage of placement can be improved. Predicting the placement of a student needs a lot of parameters to be considered. Prediction models that include all personal, social, psychological and other environmental variables are necessitated for the effective prediction of the placement of the students.

A. Data Preparations

The data set used in this study was obtained from VBS Purvanchal University, Jaunpur (Uttar Pradesh) on the sampling method for Institute of Engineering and Technology for session 2008-2012. Initially size of the data is 65.

B. Data selection and Transformation

In this step only those fields were selected which were required for data mining. A few derived variables were selected. While some of the information for the variables was extracted from the database. All the predictor and response variables which were derived from the database

III. MODELING AND ANALYSIS

Linear Regression

Linear regression is a supervised machine learning algorithm where the predicted output is a continuous and has a constant slope. It is used to predict values within a continuous range, (e.g., Sales and price). Linear regression is a very simple method but has proven to be very useful for a large number of situations.

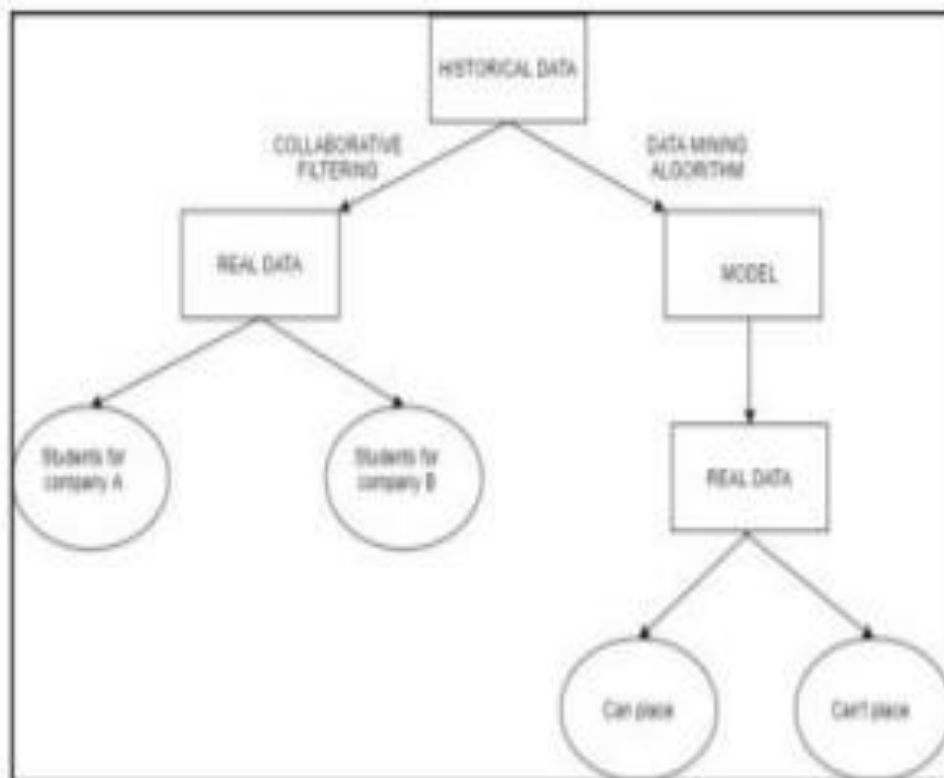


Fig 2. Linear regression flow chart

KNN Algorithm

K-Nearest Neighbour Classifiers are often known as lazy learners. The classifier proceeds by identifying objects based on closest proximity of training examples in the feature space. While determining the class, this classifier considers k number of objects as the nearest object. The main challenge of this classification technique relies on picking the appropriate value of k.

IV. RESULTS AND DISCUSSION

A. Figures and Tables

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===== RESTART: C:\Users\shivu\Desktop\Project1.py =====
  sl_no gender  ssc_p  ssc_b ... specialisation mba_p  status  salary
0     1     M  67.00  Others ...           Mkt&HR  58.80  Placed  270000.0
1     2     M  79.33  Central ...          Mkt&Fin  66.28  Placed  200000.0
2     3     M  65.00  Central ...          Mkt&Fin  57.80  Placed  250000.0
3     4     M  56.00  Central ...          Mkt&HR  59.43  Not Placed  NaN
4     5     M  85.80  Central ...          Mkt&Fin  55.50  Placed  425000.0

[5 rows x 15 columns]
(215, 15)
sl_no          int64
gender         object
ssc_p         float64
ssc_b         object
hsc_p         float64
hsc_b         object
hsc_s         object
degree_p      float64
degree_t      object
workex       object
etest_p      float64
specialisation object
mba_p         float64
status        object
salary        float64
dtype: object
sl_no          0
gender          0
ssc_p          0
ssc_b          0
hsc_p          0
hsc_b          0
hsc_s          0
degree_p       0
degree_t       0
workex         0
etest_p        0
specialisation 0
mba_p          0
status         0
salary         67
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2     M  65.00  68.00  Arts ...           Mkt&Fin  57.80  Placed  250000.0
3     M  56.00  52.00  Science ...          Mkt&HR  59.43  Not Placed  0.0
    
```

Fig 3. Data Study

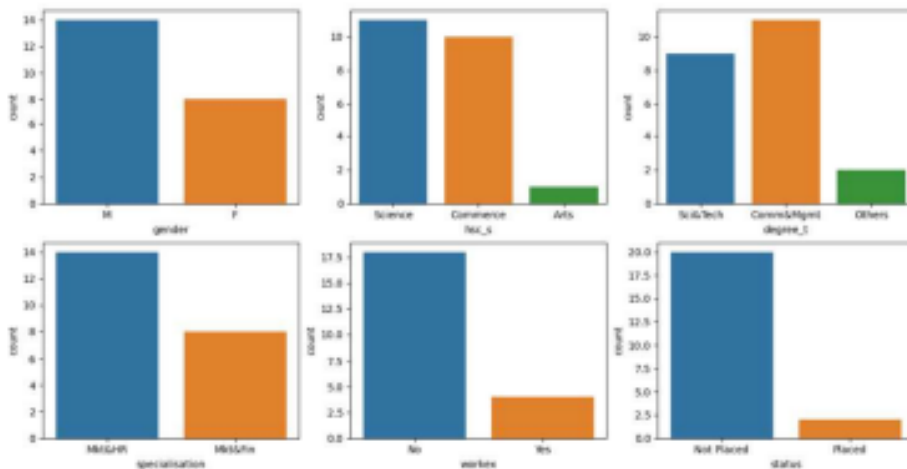


Fig 4. Data Visualisation

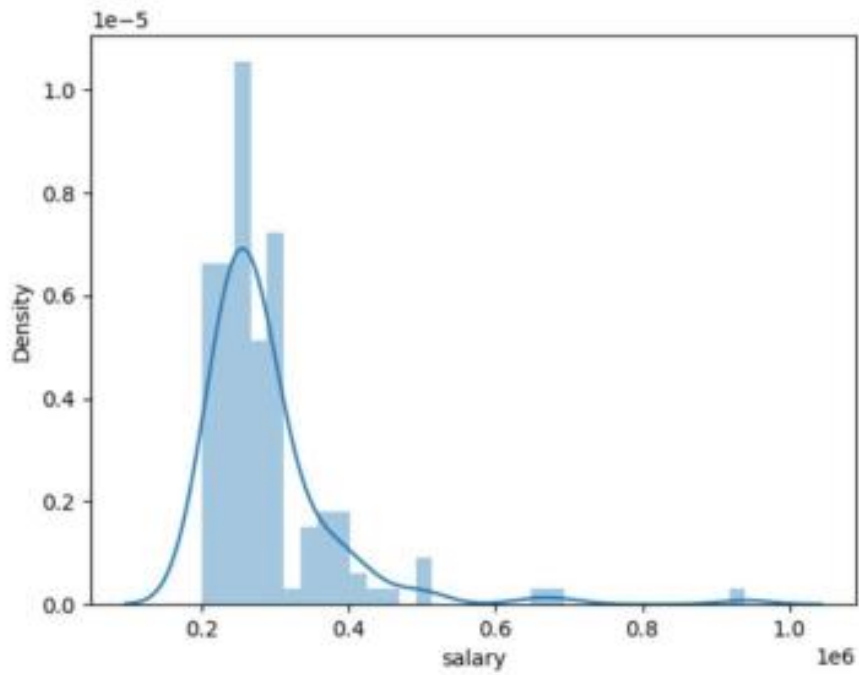


Fig 5. Salary Distribution

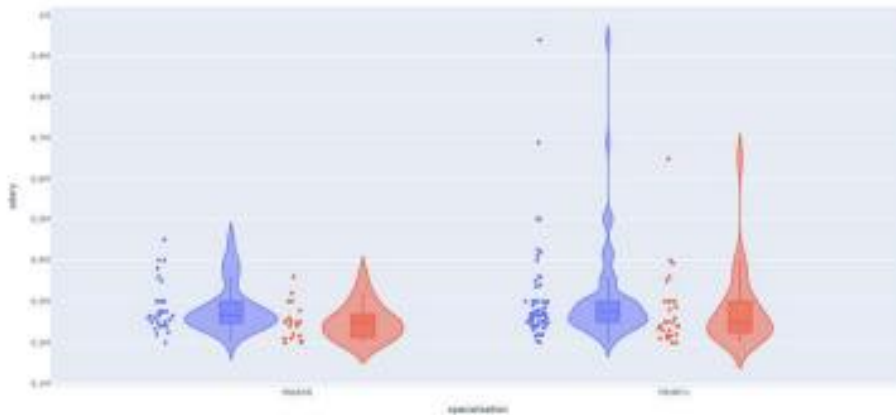


Fig 6. Relationship among the data



Fig 7. Correlation among the data

Company	Salary	Experience	Education	Placement
1 TATA Motors	80	90	80	70
2 Wipro	90	90	90	70
3 Infosys	90	90	90	70
4 HCL Tech	90	90	90	70
5 SAP Labs	90	90	90	70
6 Oracle	90	90	90	70
7 Accenture	90	90	90	70
8 Cognizant	90	90	90	70
9 Tech Mahindra	90	90	90	70
10 Capgemini	90	90	90	70
11 Zinnov	90	90	90	70
12 HaptiX	90	90	90	70
13 Mphasis	90	90	90	70
14 GlobalLogic	90	90	90	70
15 LTI	90	90	90	70
16 Mindtree	90	90	90	70
17 Genpact	90	90	90	70
18 KPMG	90	90	90	70
19 Deloitte	90	90	90	70
20 EY	90	90	90	70
21 PwC	90	90	90	70
22 IBM	90	90	90	70
23 Microsoft	90	90	90	70
24 Amazon	90	90	90	70
25 Google	90	90	90	70
26 Facebook	90	90	90	70
27 LinkedIn	90	90	90	70
28 Uber	90	90	90	70
29 Netflix	90	90	90	70
30 Airbnb	90	90	90	70
31 Slack	90	90	90	70
32 Zoom	90	90	90	70
33 Twilio	90	90	90	70
34 Docker	90	90	90	70
35 Kubernetes	90	90	90	70
36 AWS	90	90	90	70
37 Azure	90	90	90	70
38 GCP	90	90	90	70
39 MongoDB	90	90	90	70
40 Redis	90	90	90	70
41 Elasticsearch	90	90	90	70
42 Kafka	90	90	90	70
43 Hadoop	90	90	90	70
44 Spark	90	90	90	70
45 Hive	90	90	90	70
46 Pig	90	90	90	70
47 Mahout	90	90	90	70
48 Mahout	90	90	90	70
49 Mahout	90	90	90	70
50 Mahout	90	90	90	70

Fig 7. Company Recommendation Dataset

Gender:

State:

Secondary Education Percentage - 10th Grade:

10th grade Percentage:

Higher Secondary Education Percentage - 12th Grade:

12th Percentage:

Specialization in Higher Secondary Education:

Division:

Degree Percentage:

Degree Percentage:

Under Graduated Degree type: First or degree education:

Skills:

Work Experience:

Employability (without being conducted by college):

Specialization:

Specialization:

MBA Percentage:

MBA Percentage:

Fig 8. Input Page

PLACEMENT PREDICTION

Placement Prediction : You are Doing well!! You Will Get placements

Fig 9. Output page for Prediction

V. CONCLUSION

The Student Placement Prediction Based on Academic Performance has been implemented and detected.

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