Institutional Aid

Predicting Need-based Federal Reimbursement for Cloud University

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Problem Statement

"Cloud University" relies on Federal reimbursement to support its mission of providing quality education to students, especially those with financial needs. The university needs to accurately predict the need-based Federal reimbursement it will receive based on the income levels of its student body. This information is vital for budgeting, financial planning, and providing financial aid to eligible students.

Cleaning & Modeling Process

Cleaning

- Combined all nations outside of the US together
- Mapped / Dummied classification columns
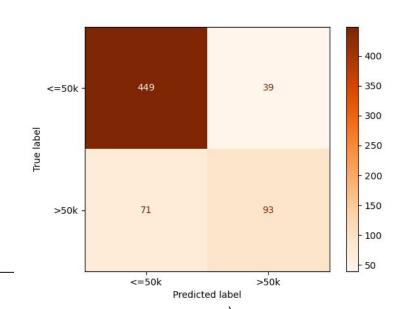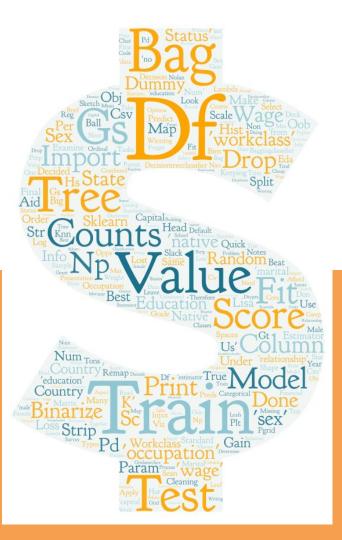- Stripped leading and trailing whitespaces

Modeling

- Models Tested:
  - Random forest
  - KNN
  - Log Reg
  - Bagged Decision Tree
  - Adaboost
- Used pipeline & gridsearch

Production Model Results

Classification Model	Accuracy	Misclassifications <=50k
Adaboost	83.1%	71

Thank You!

- Any Questions?