Document

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General metrics

5,023
characters

694
words

94
sentences

2 min 46 sec
reading time

5 min 20 sec
speaking time

Score

92

This text scores better than 92% of all texts checked by Grammarly

Writing Issues

13
Issues left

✓
Critical

13
Advanced

Unique Words

Measures vocabulary diversity by calculating the percentage of words used only once in your document

54%
unique words

Rare Words

Measures depth of vocabulary by identifying words that are not among the 5,000 most common English words.

41%
rare words

Word Length

Measures average word length

6

characters per word

Sentence Length

Measures average sentence length

7.4

words per sentence

Document

PROJECT DOCUMENTATION

Business Background

Accenture is a company that provides a broad portfolio of IT services. Founded in 1989, its headquarters are in Dublin. Accenture operates across more than 200 cities in over 120 countries. The company assists clients in various industries, such as manufacturing, finance, and energy. Despite its global achievements, the company faces financial difficulties. Reports have noted that some employees are overcompensated, while others are undercompensated. Ineffective budget allocation has also impacted project management and employee satisfaction, leading to discrepancies in resource distribution and operational inefficiency. The company's current objective is to address these internal issues to uphold its reputation as a trusted leader in IT and consulting services.

Problem Statement

Setting appropriate salaries is essential for employee satisfaction and the company's stability. At Accenture, outdated manual HR and Finance processes can lead to inequity, bias, and budget strain. Adopting AI can enhance the accuracy and fairness of salary decisions by analyzing a range of factors, thereby supporting both equitable compensation and financial well-being. HR departments rely on historical payroll data, market surveys, and managerial judgment, which can fail to account for all relevant factors such as education, experience, job role, and market trends.

This issue persists as Accenture and similar companies continue to use outdated, manual methods for determining salaries. Overpayment inflates payroll costs, while underpayment causes disengagement and reduces employee output, ultimately lowering ROI. Human subjectivity introduces bias and unfairness, and favoritism or gender influences some decisions.

This problem affects the company and its employees. Employees feel undervalued, job dissatisfaction increases, turnover rises, and stress and productivity decline.

Solution

Earnlytics is a salary prediction AI designed to support financial planning and equitable compensation. It estimates salaries using age, gender, years of experience, and education. For managing company budgets, this AI enables accurate payroll forecasting while advancing fairness and transparency. This not only guards against underpayment but also improves financial stability and strengthens trust between management and staff.

How will it benefit the community?

Beyond individual companies, fair and transparent salary allocation reduces income inequality, promotes workforce stability, and strengthens economic well-being in the wider community. It empowers employees, increases local spending, and fosters sustainable industry practices. The company will be able to give back to the community by hiring more people and offering them subsidized services.

BUSINESS OBJECTIVES

Business Success Criteria

- Develop an AI solution that assists companies in determining employee salaries.
- Develop an AI solution that eliminates bias and unfair wages.
- ☝ 65% in predicting appropriate salary ranges.
- Improvement in survey scores by at least 10%.
- Salary allocation within 5% of planned departmental budgets.
- 15–20% decrease in inequity across similar roles.

Requirements

- Data
    - Employee Data: Age, gender, Job title, Education Level, Years of experience, Salary.
    - Finance records: payroll, budget constraints, and historical compensation data.
    - Employee surveys: job satisfaction, engagement, and self-reported skills.
- Technical requirements
    - Amazon Web Services cloud servers
    - Programming languages: Python
    - Cloud deployment environments
    - Internet access for people working on the project
- Human requirements
- Access to company experts who understand the HR and finance context.
- Train the staff to know and understand the software.

Constraints

· Resource budget

· Human resources and finance compliance

· POPIA compliance (in case employees are not permitted to use their data)

· Data

Risks

- Gathering people's information, such as age, gender, education, years of experience, and salary records, may lead to privacy breaches if not properly secured.
- There is a possibility that the system might replicate existing inequity instead of fixing it.
- Companies might misuse the tool to justify lower salaries under the guise of AI fairness tool.

Tools

- Programming
  - Python libraries
    - Sk-learn
    - Matplotlib
    - Numpy
    - Pandas
    - Random
- GitHub Developer Platform
- Git
- Python IDE (Coding platform)
- AI programs
- Word
- Canva

- Excel

- PowerPoint

- Photoshop

Techniques

- Data preparation

o Converting non-numeral data into numerical data to b2e understood by machine (One-hot encoding).

o Converting blank values to NaN.

o Remove instances (rows) with NaN.

Model Training

- Supervised Machine learning approach

- Use a Regression Algorithm.

- Linear Regression

  - It combines multiple decision trees to give accurate, robust predictions and identify which factors most influence outcomes.

- Train test split

Evaluation Metrics

- Prediction Score

- Mean absolute error

- Mean square error

- Median absolute error

- Explain variance score

- R2 Score