**PROJECT DOCUMENTATION**

# Problem Statement

Setting fair salaries is important for keeping employees happy and making sure the company stays healthy. At Accenture, using old, manual processes in HR and Finance can cause unfairness, bias, and put pressure on the budget. Using AI can help make salary decisions more accurate and fairer by looking at many factors, supporting both fair pay and the company’s financial health.

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.

The problem exists because many Accenture together with many other companies still use outdated and manual methods to determine employee’s salaries. Factors such as overpayment cause the company to spend more money on the payroll budget. Underpayment demotivates employees, decreasing the value they generate while salaries remain constant, thus shrinking the return On Investment of the company. Human subjectivity further presents bias, and inequity, some other decisions are influenced by favoritism and gender.

While this problem affects the company, it affects the people as well. Employees feel undervalued. Job dissatisfaction rises and causes employees to leave. Employees end up having stress and reduced productivity.

# How will it benefit the community

Our ai solution stops payroll overruns meaning that employees will start receiving their fair salaries. The company will now be able to give back to the community in terms of donating money to charities and offer discount services. Trust is built between the community and the company, meaning there will be reduced number of unrests.

**BUSINESS OBJECTIVES**

# Business Success Criteria

* Develop an AI solution that helps companies to determine employee salaries.
* Develop an Ai solution that eliminates bias and unfair wages.

# Requirements

* Employee Data (Age, gender, Job title, Education Level, Years of experience, Salary)
* 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.
* Trainee for staff to know and understand the software

# Constraints

* Resource budget
* Human resource and finance compliance
* POPIA compliance (in case employees do not give permission to use their data)
* Data

# Risks

* Gathering people information such as age, gender, education and years of experience and salary records may lead to privacy breaches if not properly secured.
* The is a possibility that the system might replicate existing inequity instead of fixing them.
* 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

# Techniques

* Data preparation
  + Converting non-numeral data into numerical data to be understood by machine (One-hot encoding)
  + Remove NaN values
* Model Training
  + Supervised Machine learning approach
  + Use classification Algorithm
  + Random Forest classifier
  + Train test split
* Evaluation Metrics
  + Accuracy Score
  + Precision Score
  + Recall Score
  + F1 Score