London AI Summit 2024

Fetch.ai Hackathon

Group 11

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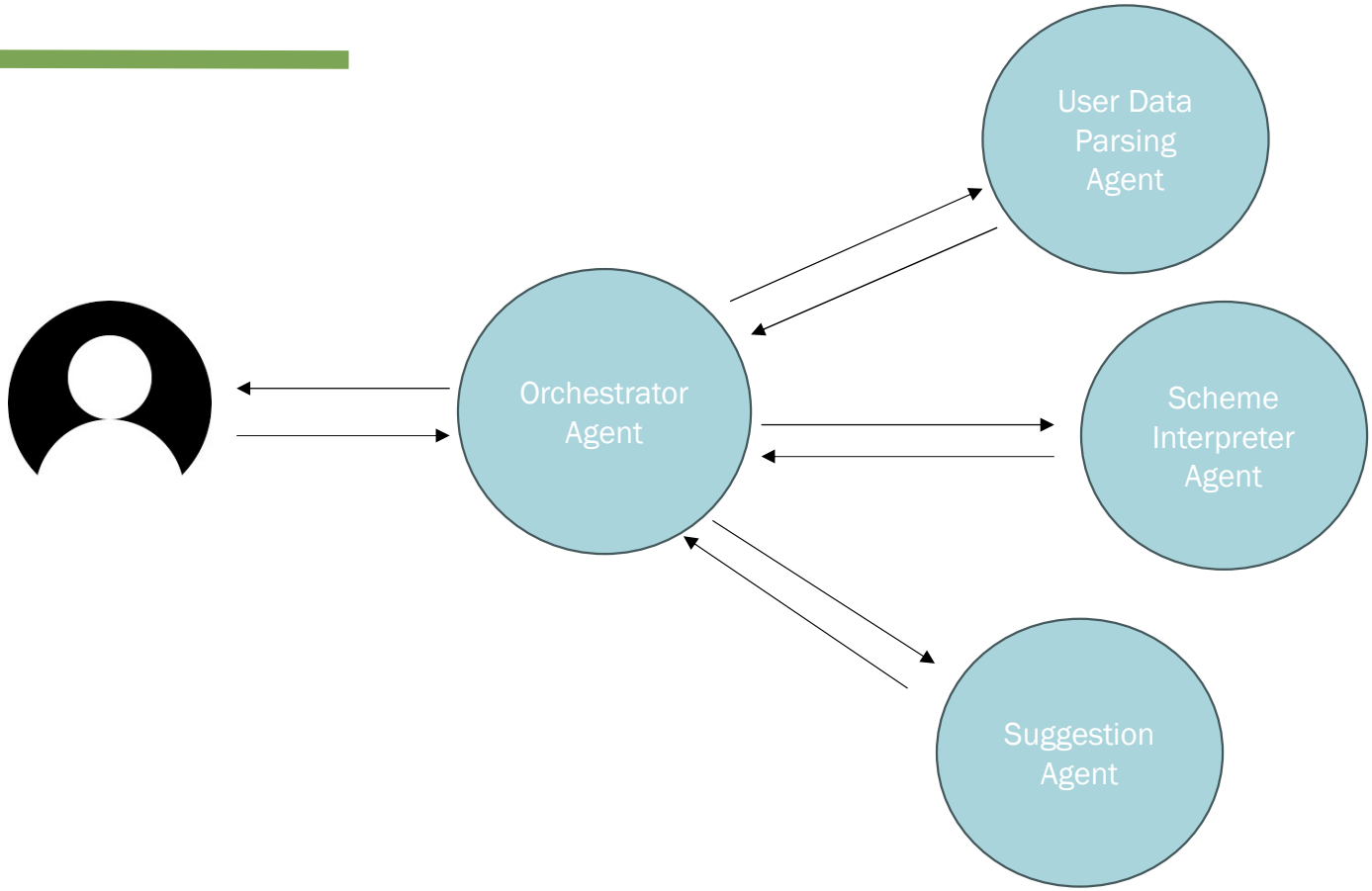
About Our Project

Try to perform pension end of year readjustment for specific users based on given pensions scheme.

Uagent 1 Year adjustment



Agents

User Data Parsing Agent

- Take in user data in any from, even natural language!
- Interprets and understands.
- Outputs structured JSON objects

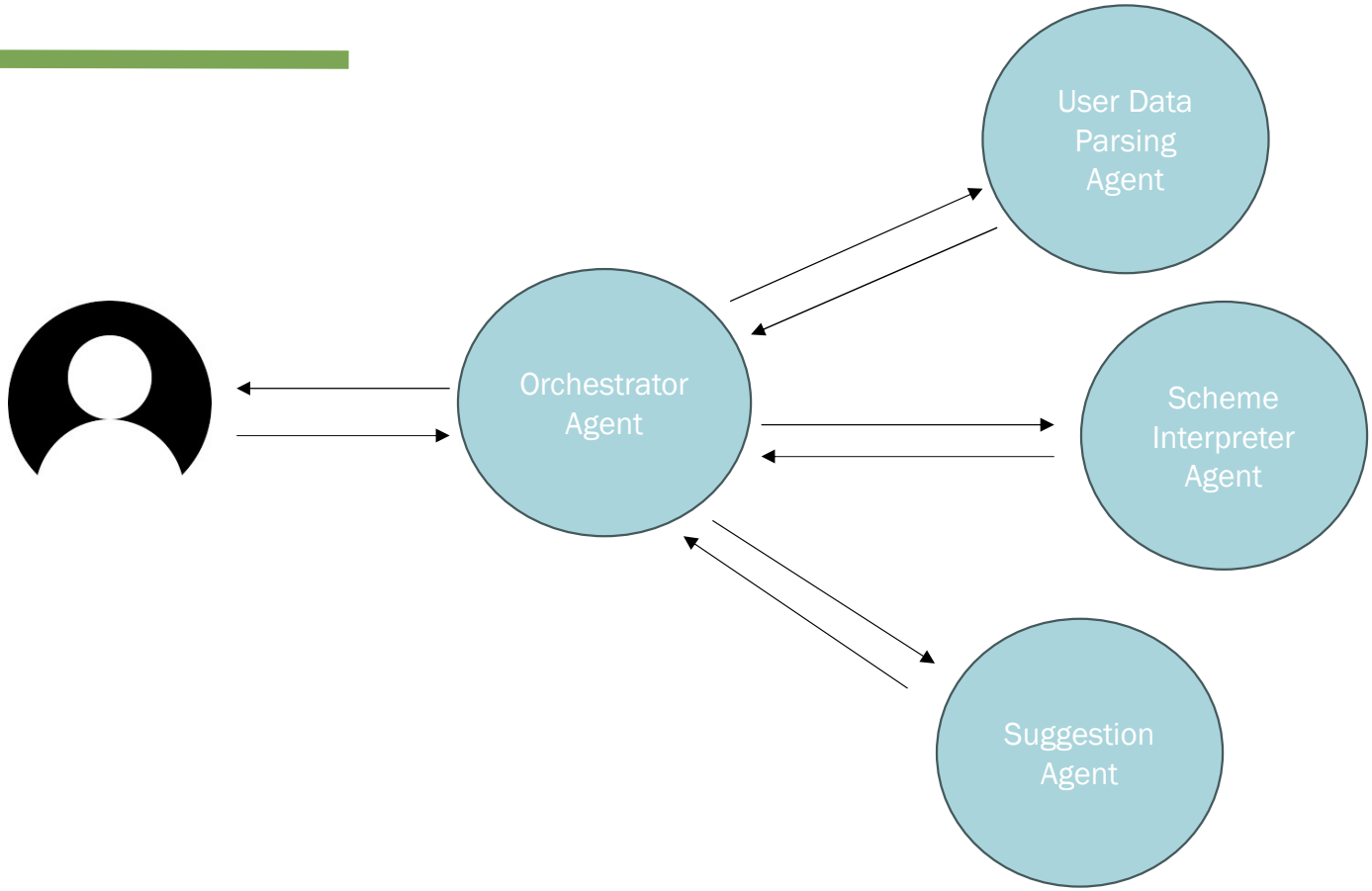
Scheme Interpreter Agent

- This agent takes in pension scheme, in many formats .doxc .pdf .txt
- Extracts useful parts/sections of the scheme into a structured format (JSON)

Recommendation Agent

- Recommends what pension adjustments to make.
- The decision is based on the generated rule set matched against parsed user data.

Uagent 1 Year adjustment



Parsing User Data

Input:

Tom not married, current pension 50000, tom is a dad has a son Bob and daughter Elsa and has retired normally.

Output:

```
{
        'Date of Birth': 'COULD NOT DETERMINE',
        'Date joined company': 'COULD NOT DETERMINE',
        'Gender': 'Male',
        'Marital Status': 'Single',
        'Pension Status': 'Pensioner',
        'No. of Children': '2',
        'Retirement Date': 'COULD NOT DETERMINE',
        'Retirement Type': 'Normal',
        'Current Pension Amount': '50000'
}
```

Uagent 1 Year adjustment output

Tom not married, current pension 50000, tom is a dad has a son Bob and daughter Elsa and has retired normally.

In the system we specified current year as 1987

Suggested adjustment

Initial: 50000.0
Adjusted: 53750.0

Pipelines explanation for its actions

1. **Pension Status:** The individual is a "Pensioner," indicating they are currently receiving pension payments.

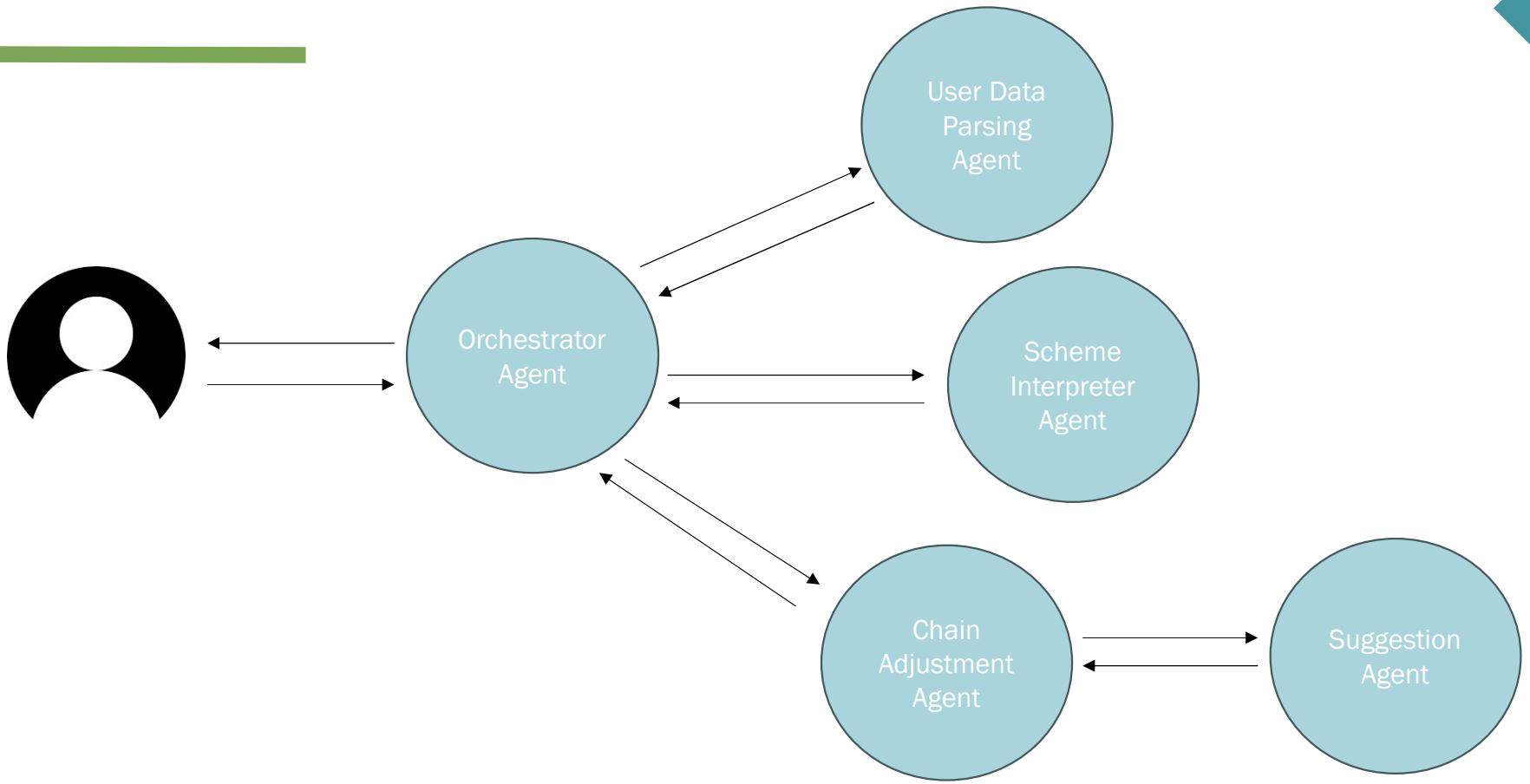
2. **Date:** We are in 1987. This means the pension payments began before April 6, 1988, making it fall under the "Pre 6/4/1988 GMP in payment" criteria.

3. **Missing Information:** We don't have the individual's date of birth, date joined company, or retirement date. However, the "Pensioner" status and the fact that we're in 1987 imply the pension payments started before the cutoff date of April 6, 1988.

4. **No GMP Information:** The provided data doesn't specify if the pension is a Guaranteed Minimum Pension (GMP) or not. The criteria "Pre 6/4/1988 GMP in payment" is the most likely to apply, given the available information and the year being 1987.

Therefore, the "Pre 6/4/1988 GMP in payment" criteria with a fixed 7.5% adjustment is the most suitable option based on the available information.

Uagent x Year adjustment



Live Demo

Live uagent on x year adjustment job

Prompt Template Management

- We created a new file format .erf – embedded referencing format
- Simple use {ERF:PATH} to embedded a file
- You can also embed variable {ERF:VAR_NAME}
- Our ERF complier takes care of read and parsing the files (we created a new library)

User Interface

Streamlined Workflow

•Upload Pension Scheme Document to automatically generate rules.

•Manually input user data profile to apply recommendation.

Data Processing Transparency

•View processed data to confirm accuracy.

•Identify missing fields with clear warnings.

User Control and Accountability

•Edit processed data for verification before finalisation.

•Maintain non-repudiation through user interaction.

Importance of Explainability

Critical System, High Accuracy

•Pension calculations have high organisational, individual, and societal impact

•No tolerance for errors due to heavy regulation (with good reason)

Explainability for Trust and Validation

•Users need to understand how their pension is calculated.

•Transparency builds trust, allows for error identification, and supports non-repudiation.

Avoiding a Black Box

•Unexplained results render the system unusable.

•Human oversight remains essential in critical financial domains.

Live Demo

Showcasing UI

Questions ?