Reaserch about Training Programme Associate

Training Programme Associate

Context

Here I present a draft outlining how I would approach my role as a Training Programme Associate at CERN.

1 Identifying skill gaps at CERN

What is a skill gap? A skill gap is the difference between the skills an individual (or team) currently possesses and those required to successfully complete a project or task. This includes both technical and soft skills.

How to detect skill gaps within a team? What strategies use?

- Individual and team self-reflection. Asking questions about:
  - Current Strengths. Which technical skills do you feel most confident in (data preprocessing, model training,..)? Which soft skills are your strengths (communication, organization, leadership)?
  - Perceived Gaps. Which technicall skills do you feel less confident in? Which soft skills do you feel less confident in?
  - Needs of the project. Which skill is the most valuable for your current project? Are there any skills you believe you lack that are critical to the success of project X?
  - Peer Assessment. What strengths do you see in your teammates? Name person by person.
- Tests and questionnaires focused to the specific domain of the project. Examples include:
  - Self-evaluation (scale of 1-10), such as:
    - Rate your technical knowledge in areas like *(e.g., machine learning, web development)* from 1 to 10.
    - Rate your soft skills (e.g., communication, teamwork, leadership) from 1 to 10.
  - Quizzes to assess theoretical knowledge related to the project's technical area. (if needed)

How do we evaluate most critical skill gap?
Start by doing an inspection to map project requirements and desired competencies. Key questions to guide the evaluation include:

- Which skill gaps are most critical to the success of the project?
- How do we determine whether it is worth investing in improving a particular skill gap?
- How can we prioritize one skill gap over another?
- What would be the expected outcomes or benefits of closing these gaps?
- Where do these gaps originate, is it due to lack of training, limited experience, or unclear role expectations?

2 Designing the Course Curriculum

From the skills gaps detected, translate them into a rolling curriculum. Draft course outlines. I will do a brainstorming that the outline shoud respond to.

- Objectives and purpose.
  - What is the skill gap being addressed?
  - Who is the target audience?
  - What is the learning outcome?
  - What is the expected impact on CERN?
- Schedule
  - What is the duration of the course (days/hours). Which is the schedule?
  - What format will the course follow (theoretical, practical, combination)?
- Theme.
  - Which are the (3) areas to focus on?
  - Which emerging trends, technologies, or methods that should be included?
- Partnerships.
  - Which partners will be involved?
  - What will each partner contribute? Which collaboration format suits each partner best?

3 Organizing the Courses

- Build and maintain partnerships with universities, research institutes and industry.
  - Offering value: visibility (e.g., featuring them on the course website), research access, knowledge exchange, prestige.
  - Maintain relation: regular communication and progress updates and improvements. Create joint events.
- Secure guest lecturers.
- Lecturer assistant tasks:
  - Handle lecturer schedule, travel and on-site logistic
  - Help lecturers refining slides, exercises and datasets.
- Arrange access to the required computing and experiment hardware for each course.
- Website updates.