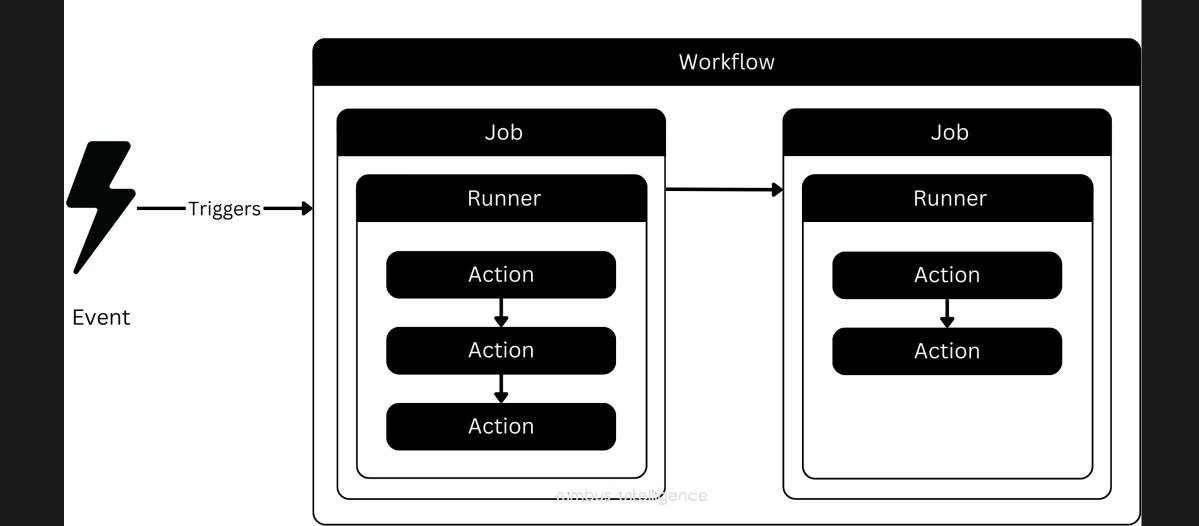# GitHub Actions

Juan Manuel Perafan

What are GitHub Actions?

- Automation tool integrated into GitHub

- Enables CI/CD (Continuous Integration/Continuous Deployment)

- Automates workflows based on events (e.g., push, pull request)

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- Data pipeline execution

- Data quality checks

- Model training and deployment

- Data Ingestion

- Cleaning stale assets

- Update documentation

GitHub Actions Components

- **Workflow**: A set of automated tasks - **defined in YAML

- **Event**: Triggers the workflow (e.g., - **push, schedule, manual)

- **Job**: A set of steps running on a - **single runner

- **Step**: An individual task (e.g., run a - **script, install dependencies)

- **Action**: Reusable step or script (e.- **g., checkout code, run tests)

Getting Started

- Create `.github/workflows/` directory - in your repo

- Add YAML file (e.g., data-pipeline.- yml)

- Define triggers, jobs, and steps

- Use existing actions (e.g., `actions/setup-python`)

- Test and monitor via GitHub's Actions

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