GitHub == free webhosting

simple case study

Requirements

- simple static website for my dancing community
- show upcoming events from public Google calendar

Components

- GitHub Pages
- own domain: shag.cz
- python with googleapiclient and jinja2
- GitHub Actions

GitHub Pages

- static content from branch, or

- generate dynamically with GitHub Actions

- result: `https://<user>.github.io/<repo>`

Custom domain

- configure DNS A records
- configure GitHub Pages to use it

Fetch events

```python
api_key = os.environ['GAPI_KEY'] # secret managed by GitHub
calendar_id = "<...>@group.calendar.google.com"
maxResults = 10
service = build("calendar", "v3", developerKey=api_key)
events_result = service.events().list(
    calendarId=calendar_id,
    timeMin=now, singleEvents=True, orderBy="startTime",
    maxResults=maxResults, timeZone="Europe/Prague").execute()
```

Parse events

```
"events": [
    {
        "summary": "Shag open trénink - 4.p.",
        "when": "2024-08-08 17:30 - 19:00"
    },
    ...
]
```

Page template

```
<h2>Upcoming events:</h2>
<ul>
{% for event in events %}
    <li>
        <span class="summary">{{ event.summary }}</span>
        <span class="when">({{ event.when }})</span>
    </li>
{% endfor %}
```

Generate page

```python
environment = Environment(loader=FileSystemLoader("./"))
page_template = environment.get_template("template.html")
context = {
    "events": events,
    }
with open("index.html", mode="w", encoding="utf-8") as page:
    page.write(page_template.render(context))
```

Publish site

```yaml
on:
  push: # refresh in case of changes
    branches: ["master"]
  schedule: # refresh every hour
    - cron:  '42 * * * *'
  workflow_dispatch: # refresh manually
...
jobs:
  deploy:
    environment:
      name: github-pages
      url: ${{ steps.deployment.outputs.page_url }}
    runs-on: ubuntu-latest
    steps:
      - name: Checkout
        uses: actions/checkout@v4
      - name: Setup Pages
        uses: actions/configure-pages@v5
      - name: Generate index.html
        env:
          GAPI_KEY: ${{ secrets.GAPI_KEY }}
        run: |
          sudo apt-get install -y python3 python3-jinja2 python3-googleapi
          python3 fetch-events.py
          rm -f fetch-events.py
      - name: Upload artifact
        uses: actions/upload-pages-artifact@v3
        with:
          path: '.'
      - name: Deploy to GitHub Pages
        id: deployment
        uses: actions/deploy-pages@v4
```

```html
<div class="container"> <h2 class="item1">Result</h2> <img class="item2" src="./web.webp" style="object-fit: contain; max-height: 600px;"/> </div>
```

Reference

- sources

- shag.cz web