We are Pythonistas

Python 기반 정적 (Static) 웹 사이트를 DevOps와 클라우드로 빌드하기

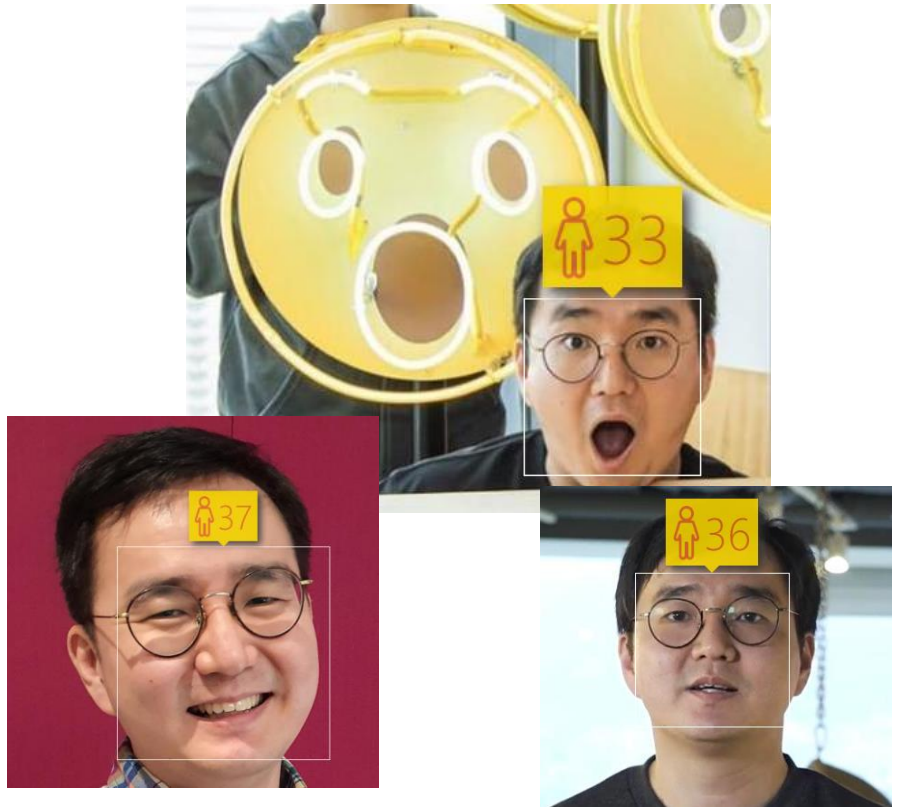
최영락, 유저스틴

PYCON KOREA 2020

최영락

Developer Product Marketing Manager at Microsoft

@ianychoi



유저스틴
Senior Cloud Advocate
Developer Relations
Microsoft

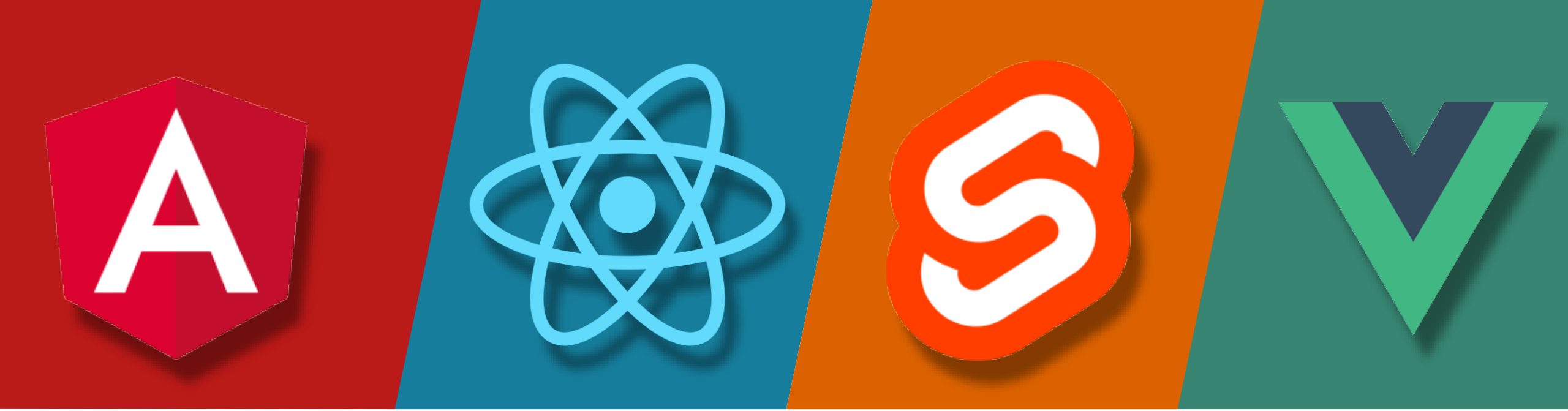
@justinchronicle
@justinyoo

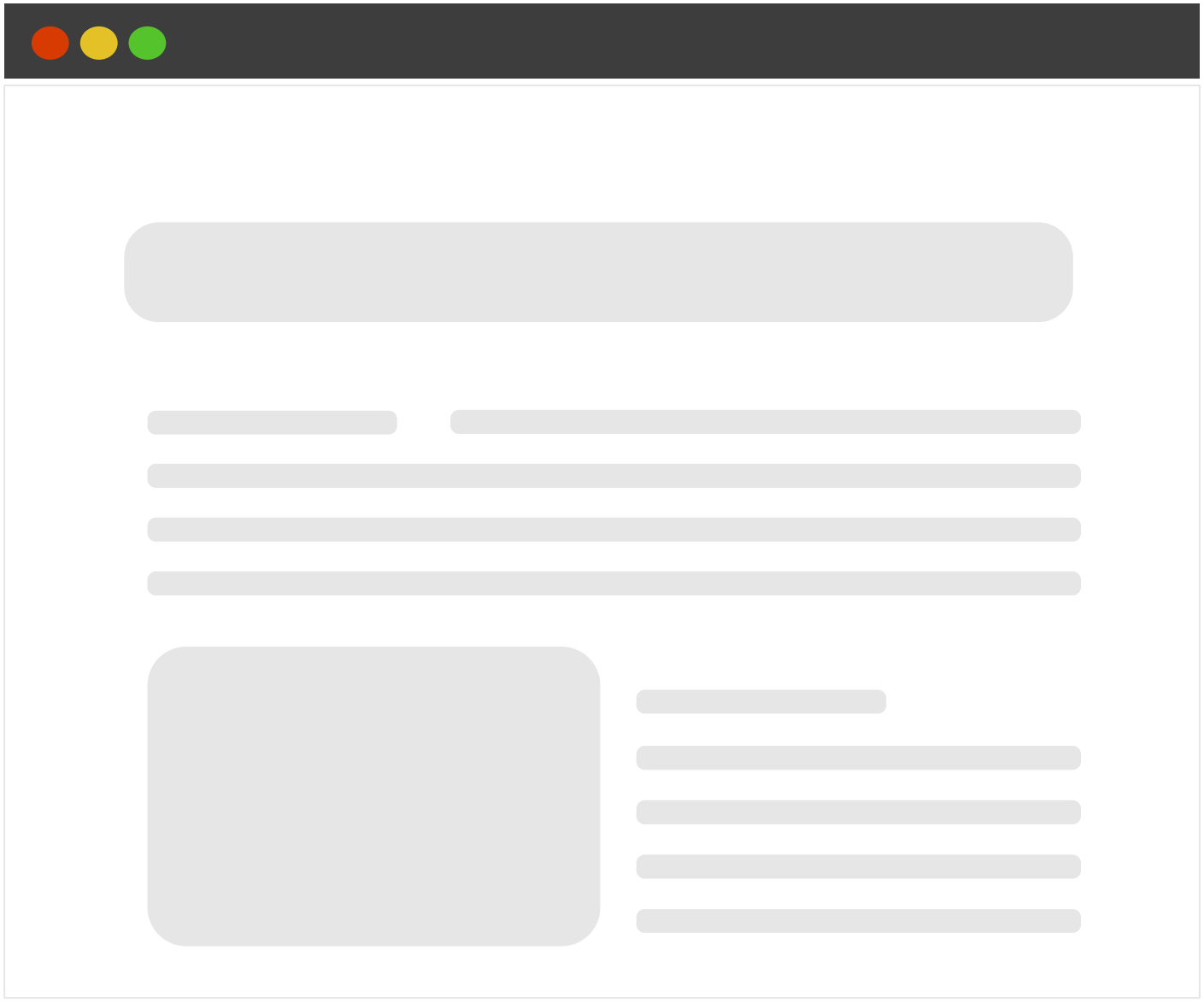
Agenda

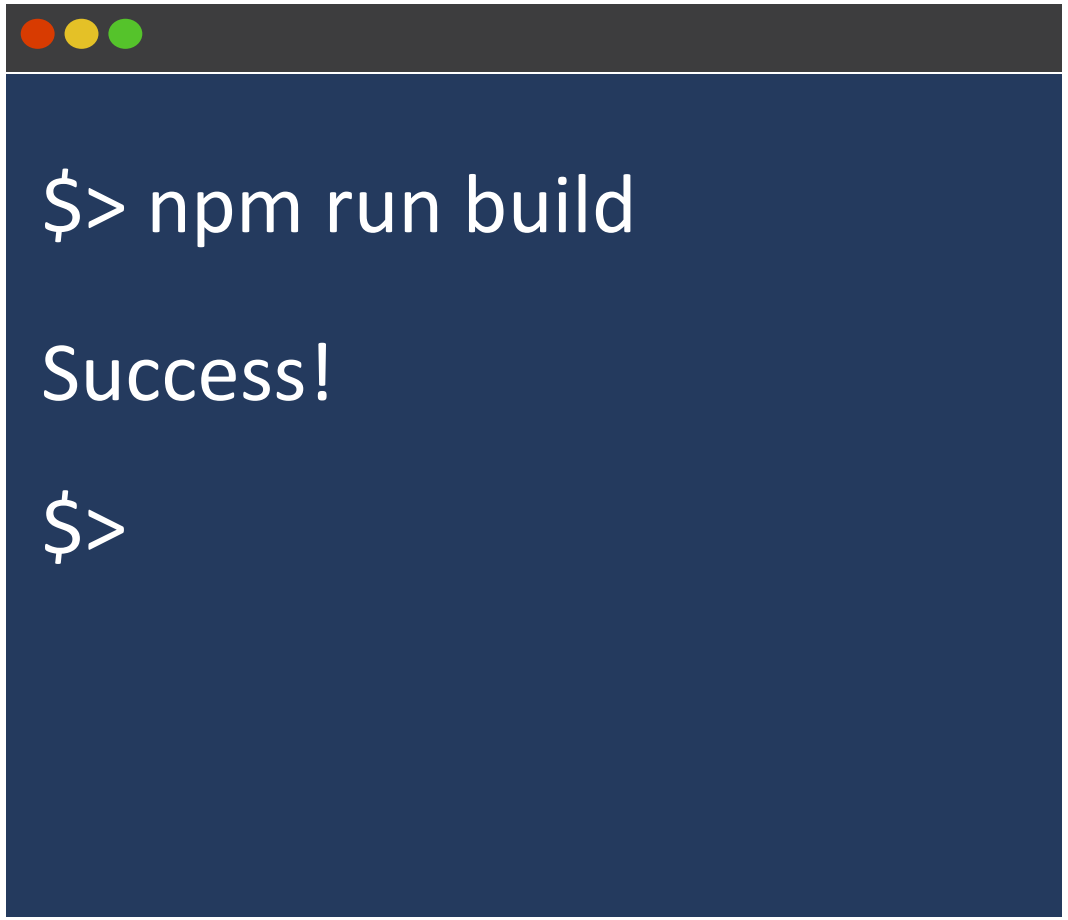
- JAM Stack과 정적 웹 사이트
- 정적 웹 사이트 빌드를 위한 Python 라이브러리
- 클라우드와 DevOps를 활용한 정적 웹 사이트 구축
- 데모: GitHub Actions & Azure Static Web App
- 정적 웹 사이트 활용 가치
- 마무리

Microsoft Azure

JAM Stack과 정적 웹 사이트


A





/build
index.html
main.min.js
main.min.css

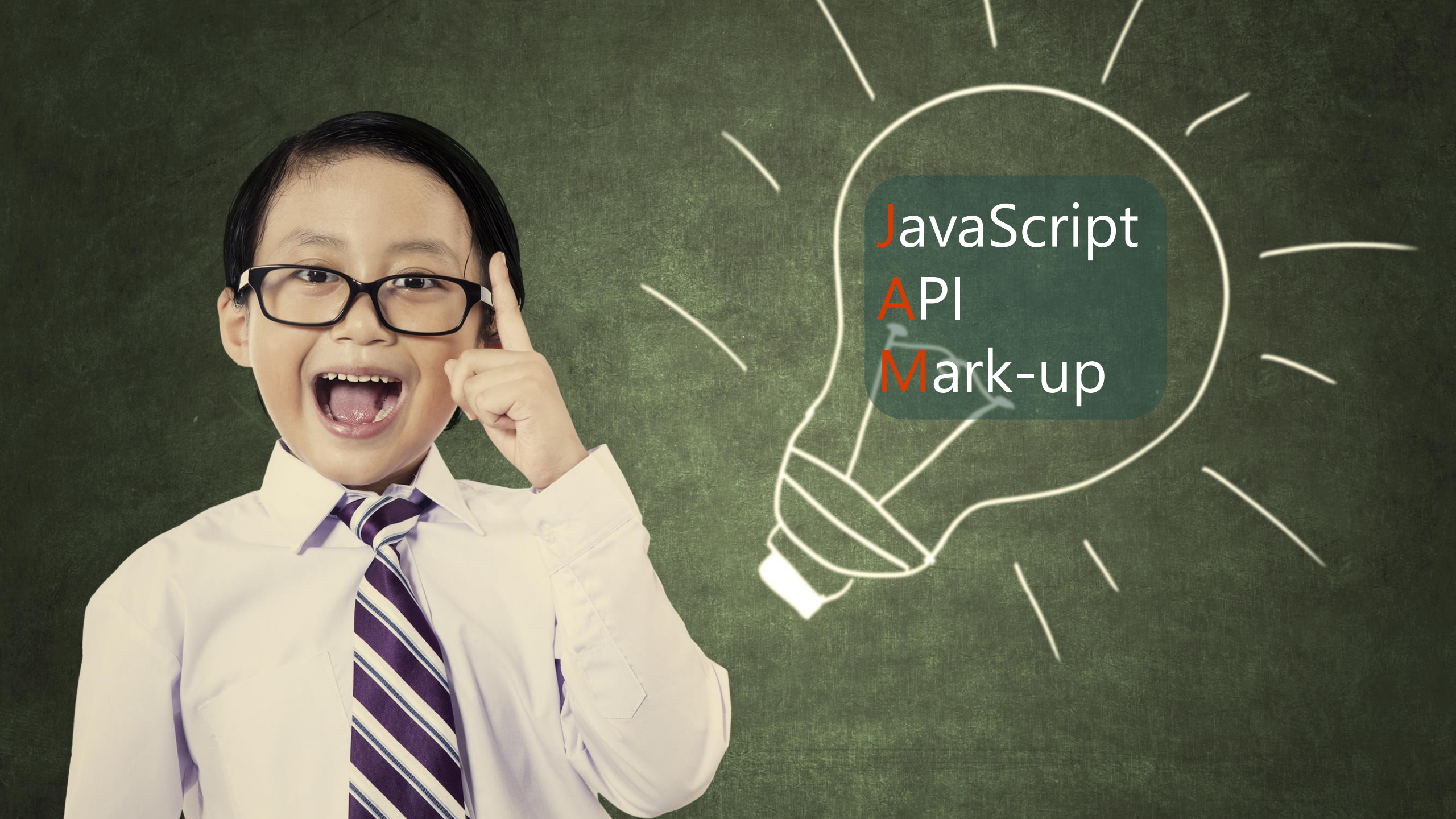
GitHub Pages

https://pages.github.com


JAM Stack

JAM 스택이 뭔가요?


in gourmand
rge Bourcier
Les oeufs
Francaye
270 mL / 10.5 oz

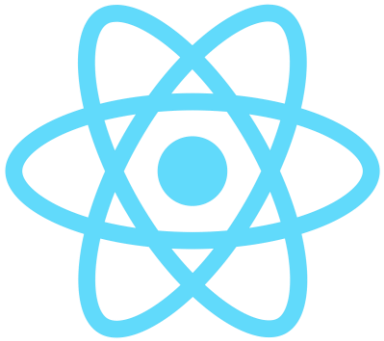

JavaScript
API
Mark-up

다양한 정적 웹 사이트 빌더

VuePress

Gatsby

SAPPER

scully

Gatsby

SAPPER

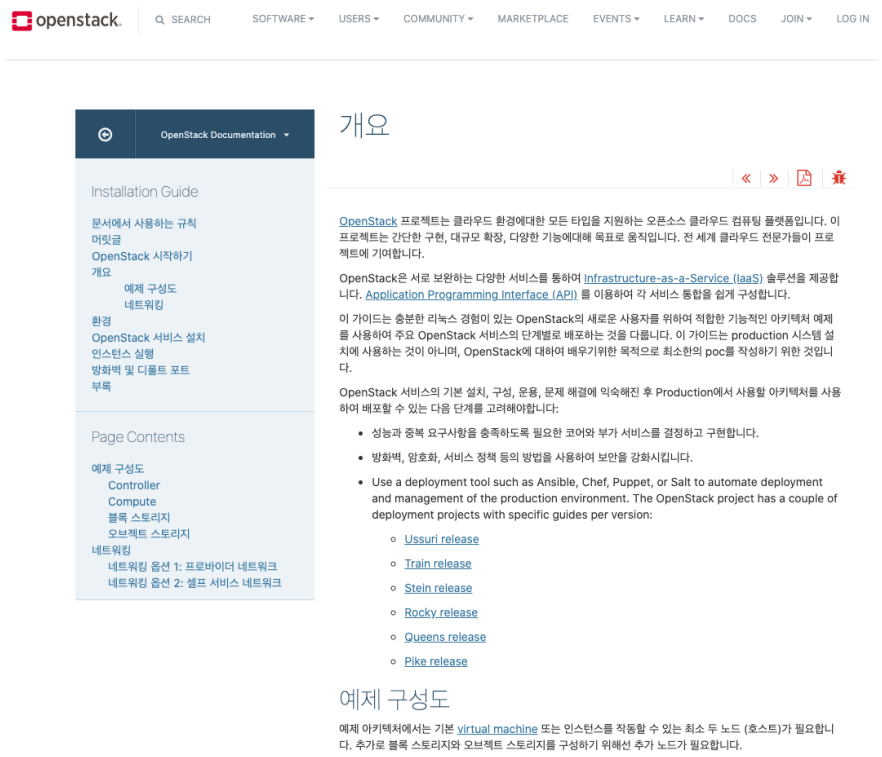
VuePress

Microsoft Azure

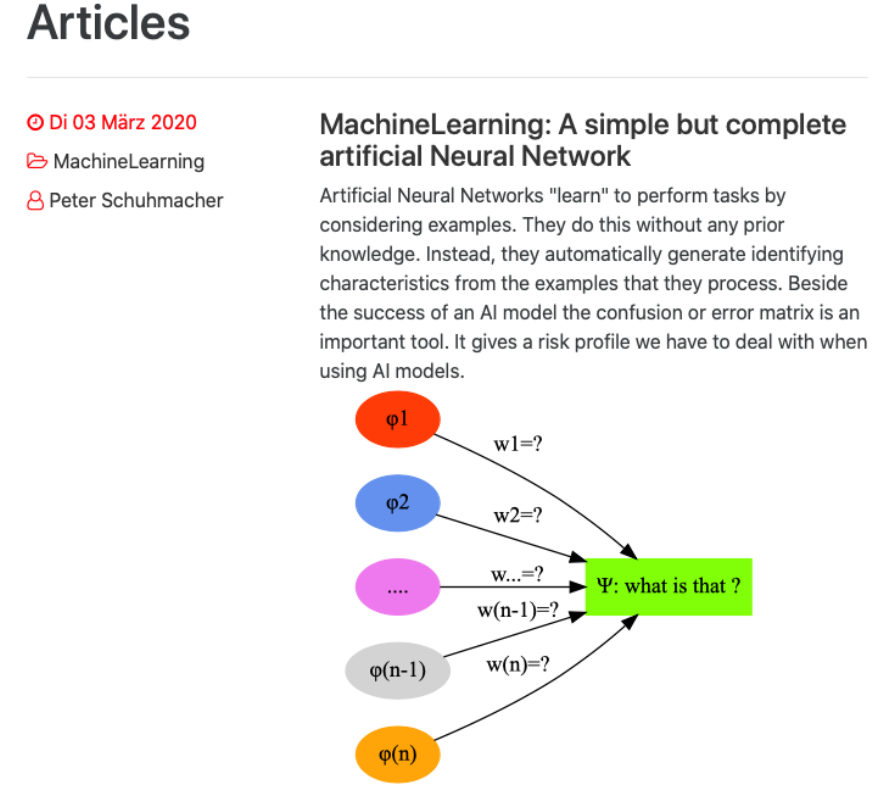
정적 웹 사이트 빌드를 위한 Python 라이브러리

다음 페이지들은 어떻게 만들어졌을까요?

PyCon 콜롬비아 홈페이지



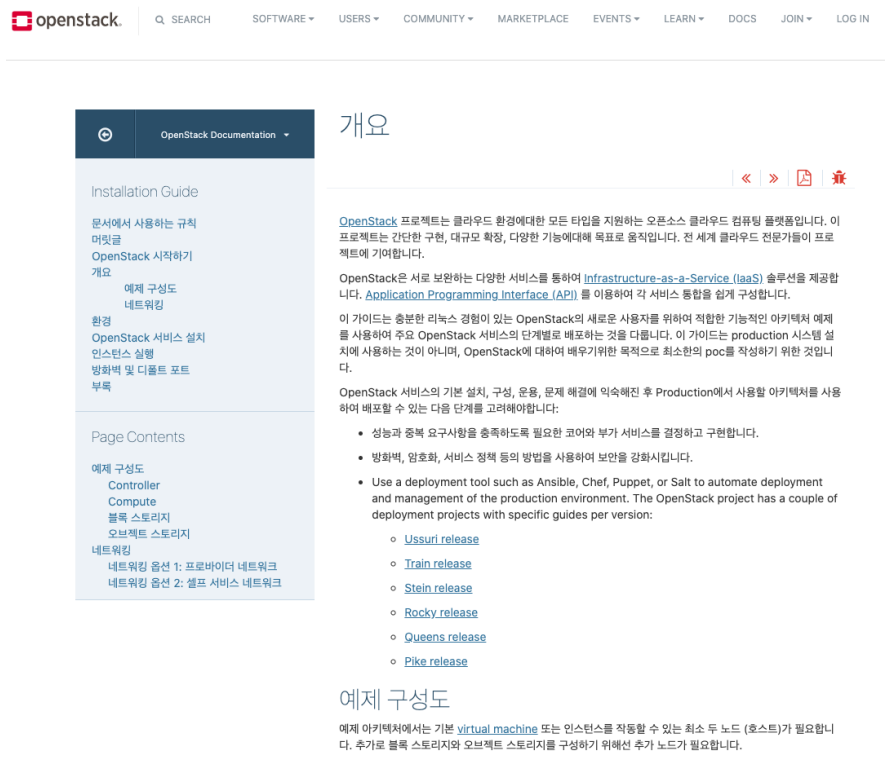
OpenStack 문서 – 설치 가이드



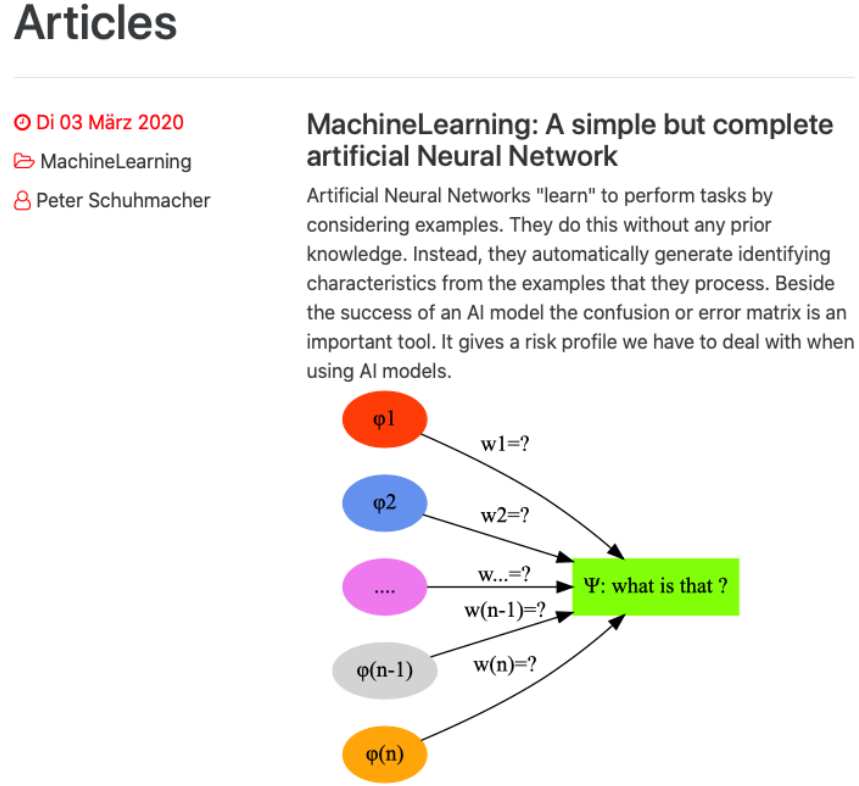
개인 블로그 페이지

다음 페이지들은 어떻게 만들어졌을까요?

$ pip install **lektor**



$ pip install **sphinx**

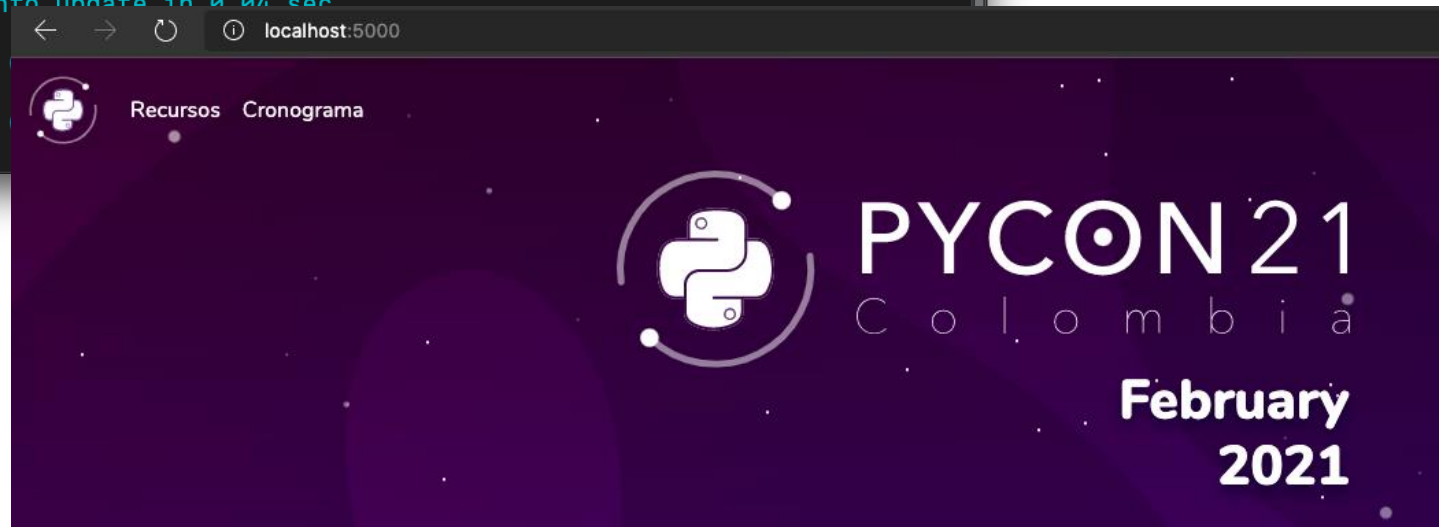


$ pip install **pelican**

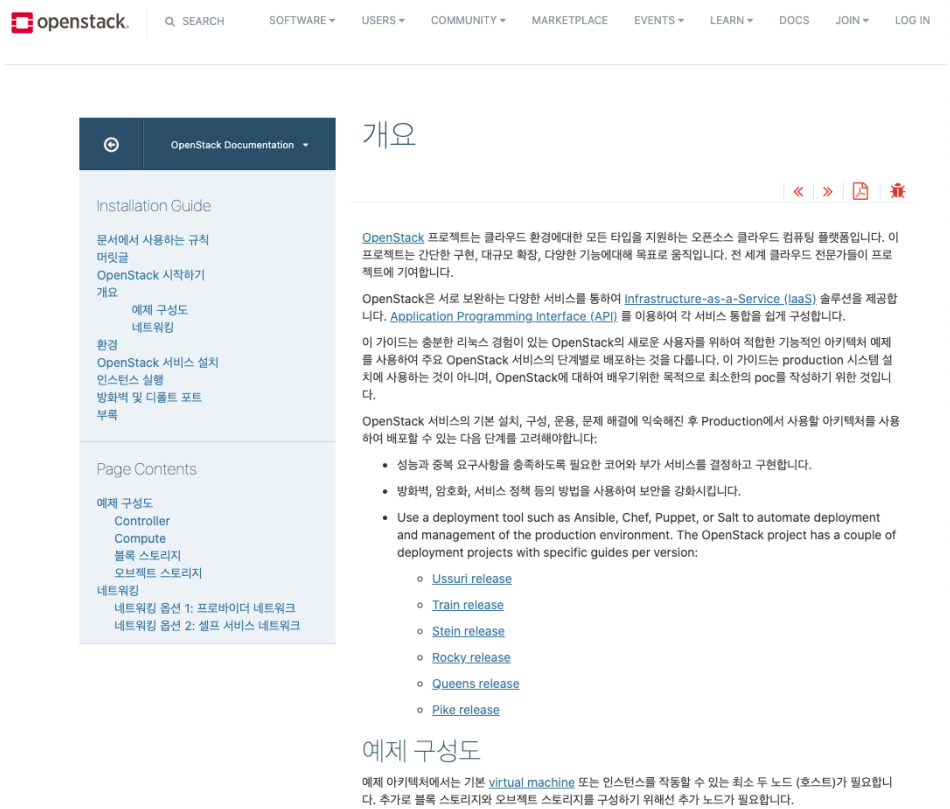
직접 빌드도 가능해요: PyCon 콜롬비아 홈페이지

PyCon 콜롬비아 홈페이지

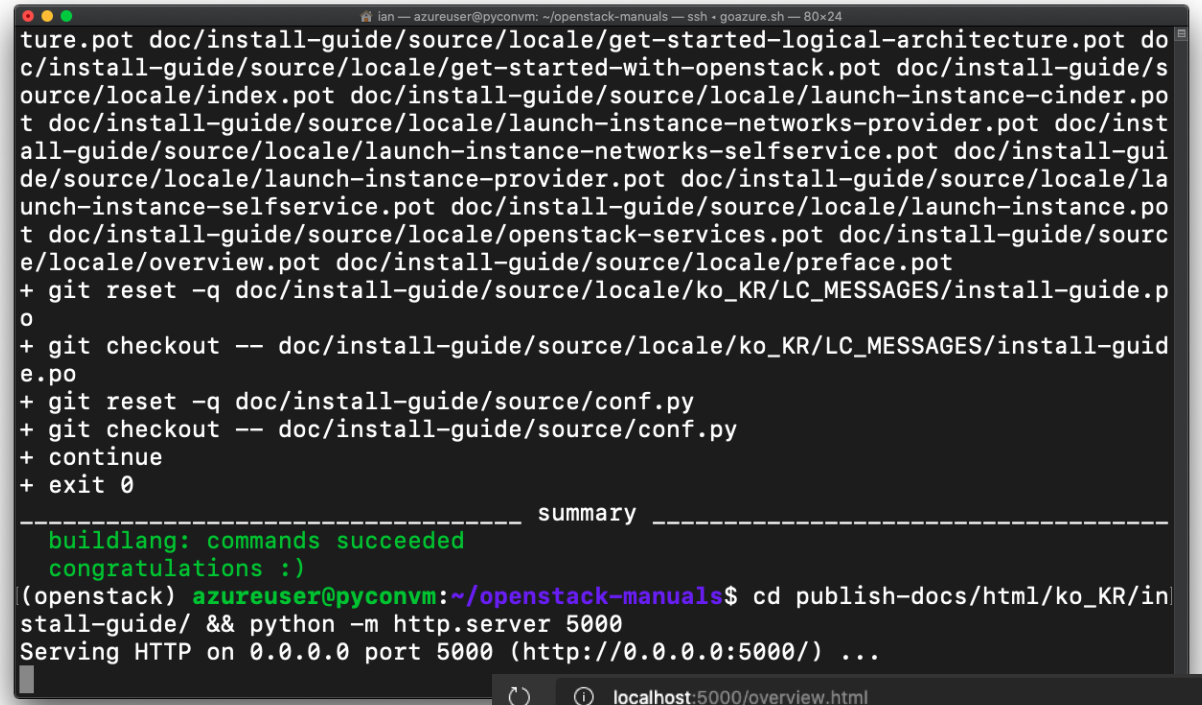
```
ian — azureuser@pyconvm: ~/website-2021 — ssh • goazure.sh — 80×24
Force package cache refresh.
Updating packages in /home/azureuser/.cache/lektor/packages/38123ca1685452ec758b
28677a077098 for project
Processing /home/azureuser/.cache/pip/wheels/85/6b/07/81d979e87d67c55d23d0e896d4
69ce7b874d55a8cd4e93a3c0/lektor_google_analytics-0.1.3-py3-none-any.whl
Installing collected packages: lektor-google-analytics
Successfully installed lektor-google-analytics-0.1.3
(pyconco) azureuser@pyconvm:~/website-2021$ lektor server
/home/azureuser/pyconco/lib/python3.8/site-packages/lektor/pluginsystem.py:171:
DeprecationWarning: The plugin "google-analytics" function "on_setup_env" does n
ot accept extra_flags. It should be updated to accept `**extra` so that it will
not break if new parameters are passed to it by newer versions of Lektor.
  warnings.warn(
 * Project path: /home/azureuser/website-2021/pyconcolombia.lektorproject
 * Output path: /home/azureuser/.cache/lektor/builds/93943922252b07339dd2fdc0b77
ee576
Started source info update
 * Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
Finished source info update in 0.04 sec
Started build
Finished build in
Started prune
Finished prune in
```

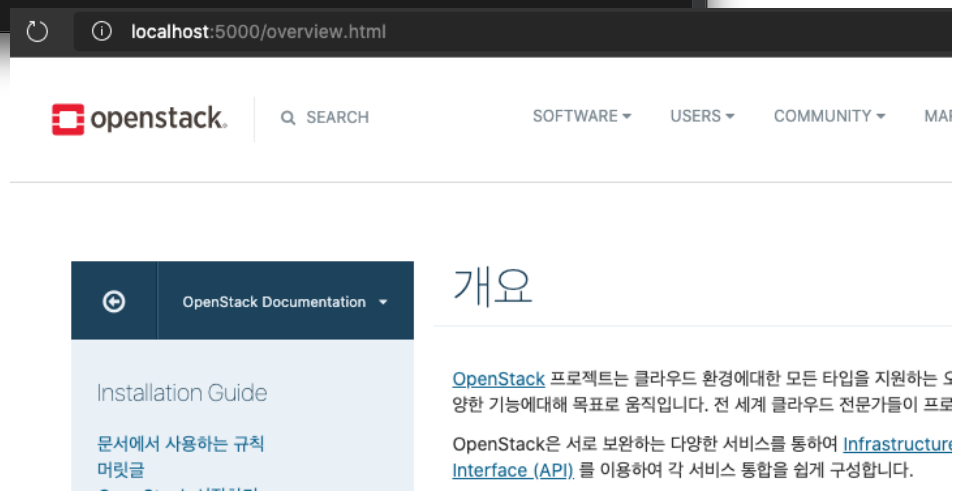


직접 빌드도 가능해요: OpenStack 문서 – 설치 가이드

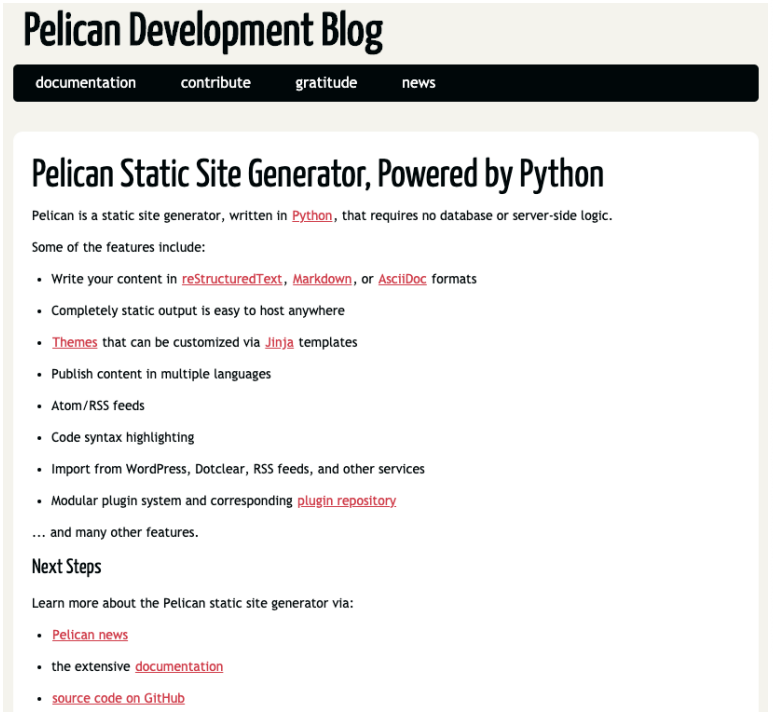


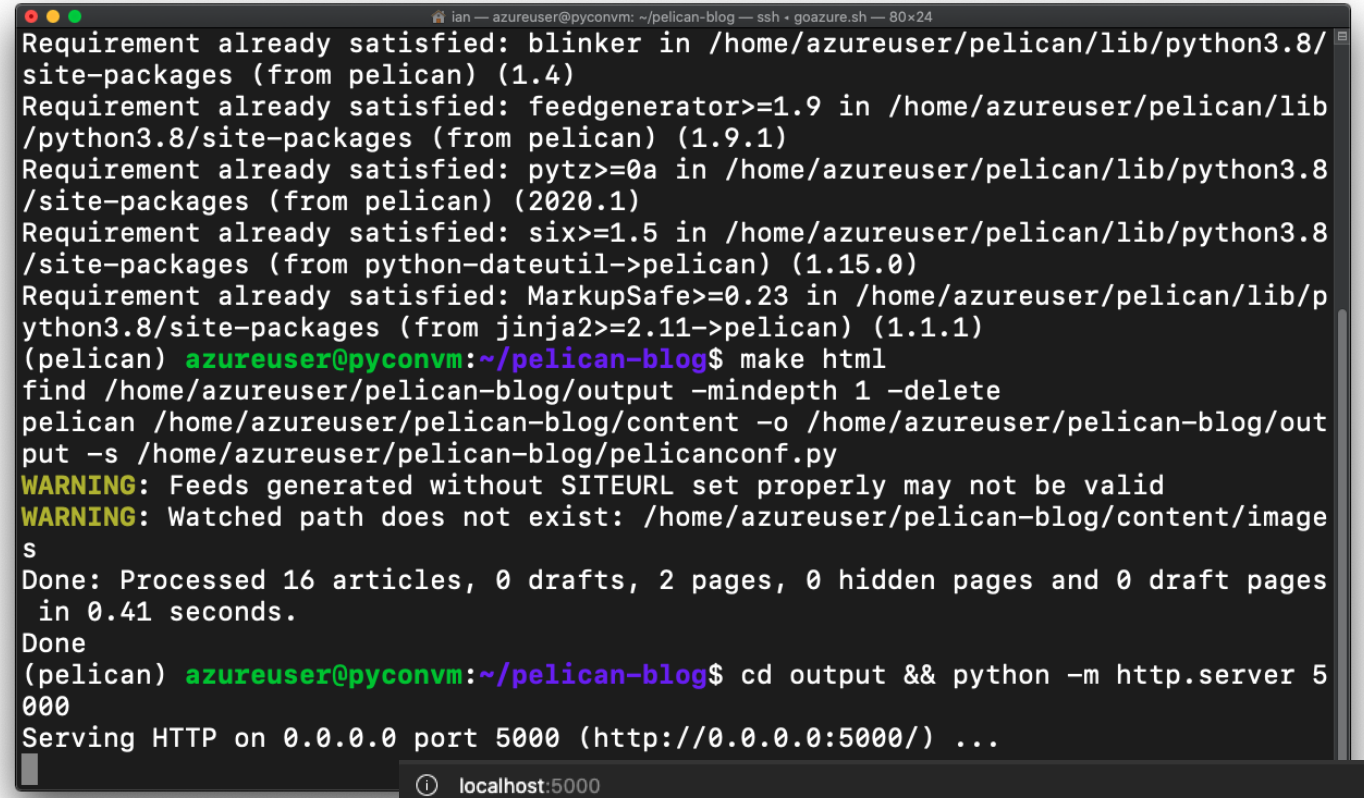
OpenStack 문서 – 설치 가이드





직접 빌드도 가능해요: Pelican 블로그 예제 페이지





Pelican 블로그 예제 페이지

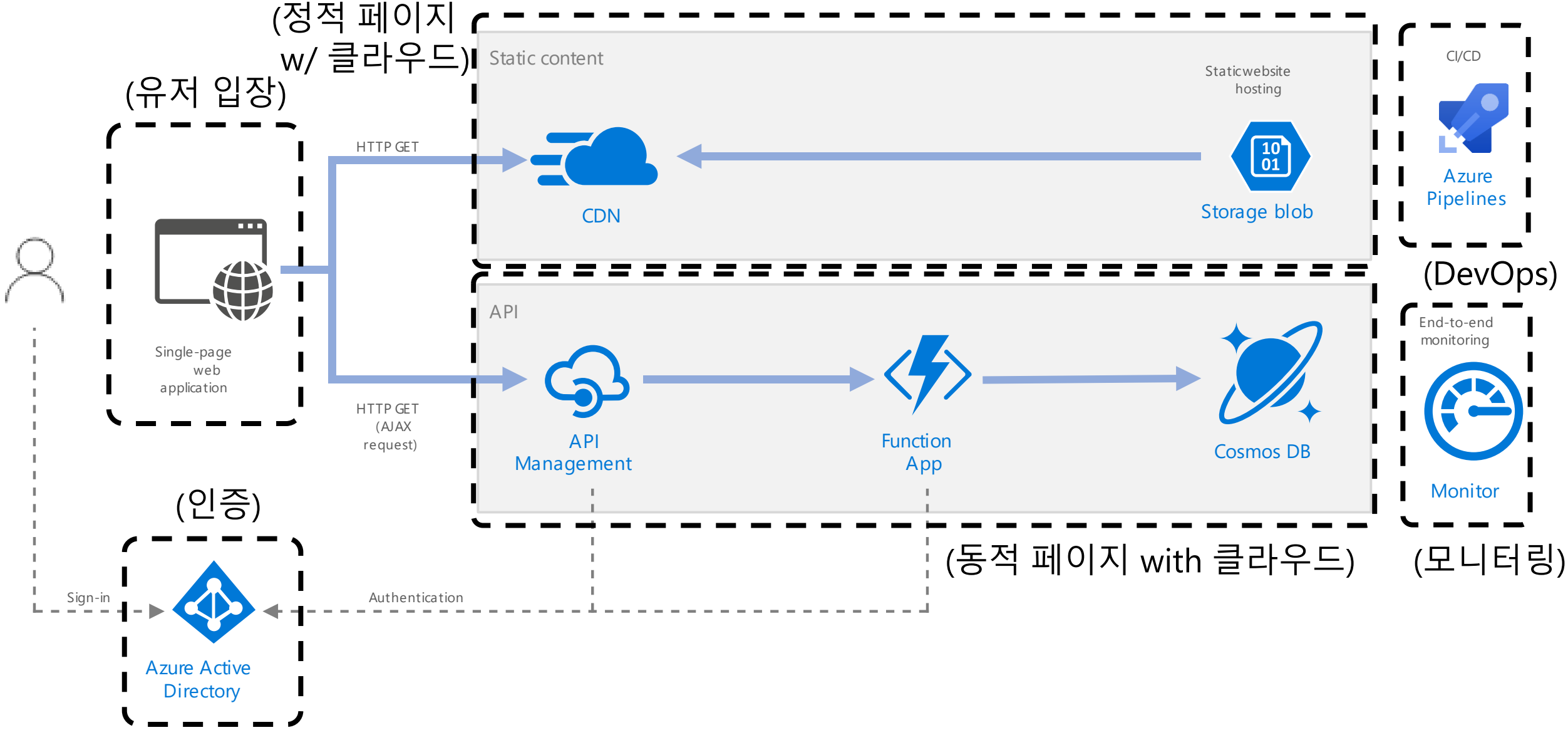
정적 웹 사이트 빌드를 위한 다양한 **Python** 라이브러리

Builder	Project URL	Support format(s)	License	GitHub Stars (Aug 2020)	Active
Lektor	github.com/lektor/lektor	Text with .lr extension	BSD	3.3k	O
Sphinx	github.com/sphinx-doc/sphinx	reStructuredText	BSD	3.5k	O
Pelican	github.com/getpelican/pelican	reStructuredText, Markdown	AGPL -3.0	9.9k	O
MkDocs	github.com/mkdocs/mkdocs	Markdown with YAML configuration	BSD	10.7k	O (last commit: 4 months ago)
Cactus	github.com/eudicots/Cactus			3.4k	Last commit: July 31, 2017

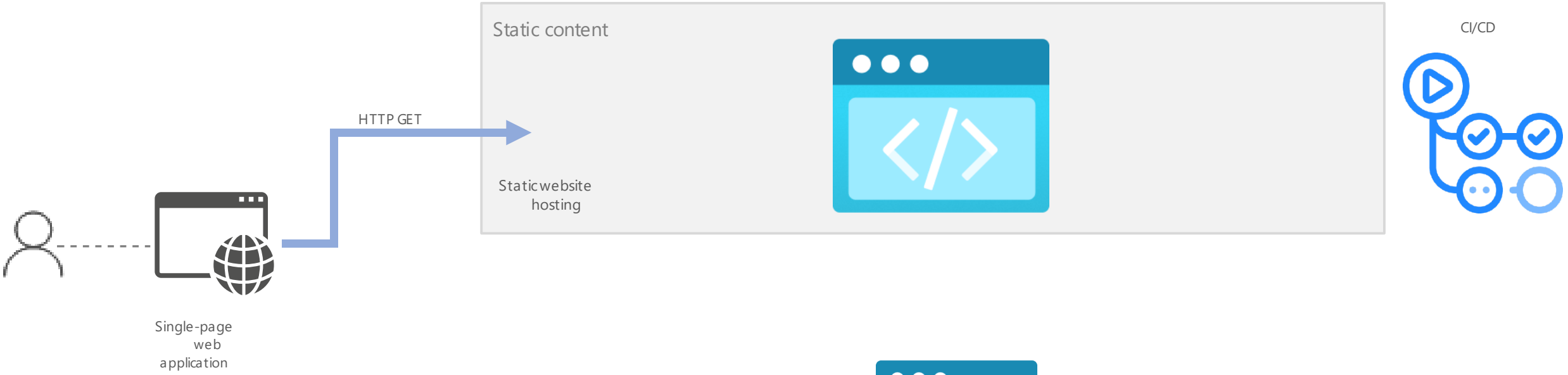
Microsoft Azure

클라우드와 DevOps를 활용한 정적 웹 사이트 구축

(Generic/Scalable) 정적 웹 사이트를 포함한 아키텍처



(데모에서 볼) 클라우드 & DevOps를 활용한 정적 웹 사이트 구축



Python 라이브러리: lector & sphinx

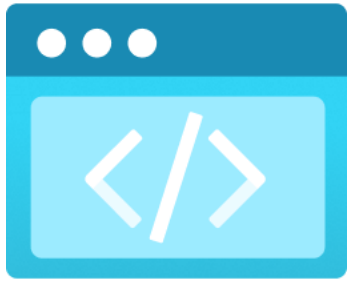
(동적 페이지, 인증, 모니터링 제외)

with

Azure Static Web Apps

GitHub Actions

데모 환경: 클라우드 (Azure) & DevOps (GitHub Actions)

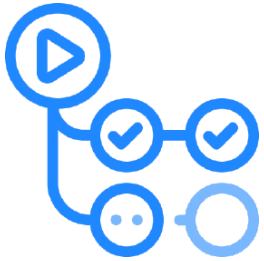


Azure Static Web Apps (현재 preview)

잘 알려진 정적 웹 사이트 빌더 (Gatsby, Hugo, ...)지원 및 인증 통합을 손쉽게 지원

기존에 직접 정적 콘텐츠를 Blob 스토리지 업로드 & CDN 구성하지 않고도 알아서 해줌

동적 콘텐츠에 대해서는 Azure Functions와 쉽게 연계 가능하도록 다양한 기능을 지원



GitHub Actions

GitHub 프로젝트에 대해 손쉽게 CI/CD 기능을 연동하여 DevOps 환경을 구현

원하는 Workflow를 YAML로 정의 후 .github/workflows 디렉토리에 저장하여 구현

이미 만들어진 많은 Action들을 활용하여 손쉽게 원하는 작업을 CI/CD로 구현 가능

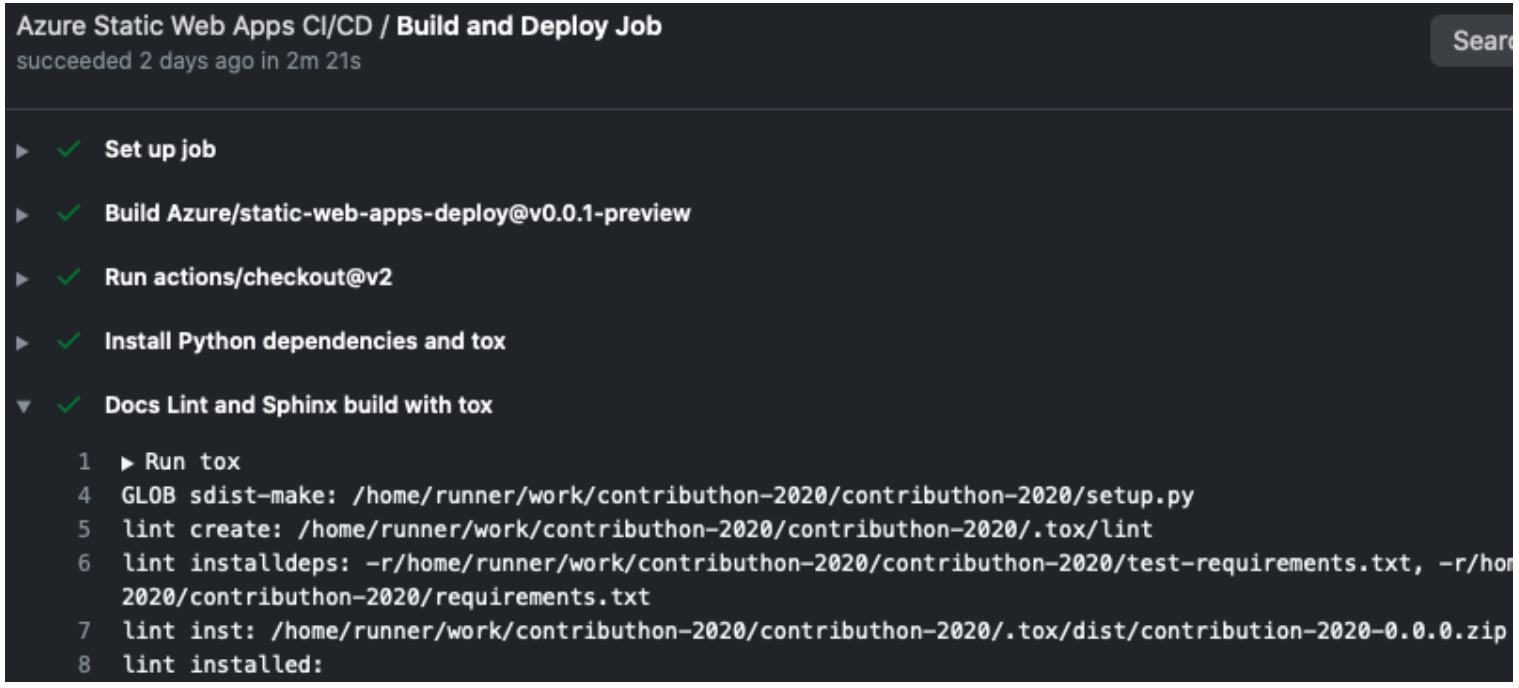
Microsoft Azure

데모: GitHub Actions & Azure Static Web App

```yaml
jobs:
  build_and_deploy_job:
    if: github.event_name == 'push' || (github.event_name
    runs-on: ubuntu-latest
    name: Build and Deploy Job
    steps:
      - uses: actions/checkout@v2
        with:
          submodules: true
      - name: Setup Python
        uses: actions/setup-python@v1
        with:
          python-version: "3.7"
          architecture: "x64"
      - name: Install python dependencies
        run: |
          python -m pip install --upgrade pip
          pip install lektor
      - name: Show python environment
        run: |
          python --version
          python -m pip list
      - name: Install plugins
        run: lektor plugins reinstall
      - name: Build site
        run: lektor build --output-path site
      - name: Build And Deploy
        id: builddeploy
        uses: Azure/static-web-apps-deploy@v0.0.1-preview
        with:
```

(비디오 등으로
대신 데모 예정)

```yaml
jobs:
  build_and_deploy_job:
    if: github.event_name == 'push' || (github.event_name
    runs-on: ubuntu-latest
    name: Build and Deploy Job
    steps:
      - uses: actions/checkout@v2
        with:
          submodules: true
      - name: Install Python dependencies and tox
        run: |
          python -m pip install --upgrade pip
          sudo apt install python-tox
      - name: Docs Lint and Sphinx build with tox
        run: tox
```



Microsoft Azure

정적 웹 사이트 활용 가치

정적
웹사이트


CMS


정적
웹사이트


CMS
보안
정적
웹사이트


CMS
보안
정적
웹사이트
성능


CMS
보안
정적
웹사이트
확장
성능


CMS
보안
성능
확장
비용
정적
웹사이트

Microsoft Azure

마무리

Python 개발자에게도 더 이상 낯설지 않은 환경이기를..

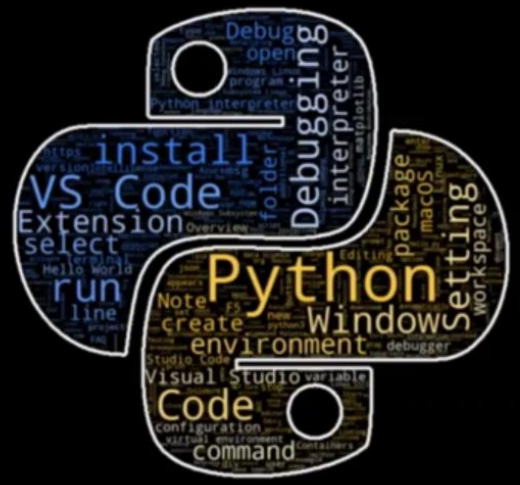
정적 웹 사이트 빌더
(Lektor, Sphinx, Pelican, ...)

Python 프로젝트도 손쉽게
연동 가능한 CI/CD

Invent with Purpose
무궁무진한 클라우드 활용

Microsoft

Thank you!



Session & Demo

Python 기반 정적 (Static) 웹 사이트를 DevOps와 클라우드로 빌드하기

최영락 | Developer Product Marketing Manager
유저스틴 | Senior Cloud Advocate