

# thomasayih-akakpo

Software Developer, API designer

## contact

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## languages

French (mother  
tongue)  
English and  
Spanish: spoken,  
written

## programming

♥ Python  
C, Java  
JavaScript

## profile

Graduated as a telecom engineer, free software advocate, human-machine and machine-machine interfaces geek. I am also curious about almost anything related to embedded software and more specifically to free (as in 'freedom of speech') embedded software.

## skills

- meta-programming in Python
- creating high availability APIs in Python (spyne for SOAP, Flask and django-tastypie for REST)
- designing web app with Django dealing with big data: I did re-design a ticket manager for an ISP's monitoring division
- designing cluster to handle high amount of requests per secondes: for instance I did create a cluster for multimedia streaming in Madagascar
- task scheduling: mainly with RabbitMQ when it comes to deal with high input HTTP traffic
- designing VoIP networks
- Emacs addict, Debian GNU/Linux user, Mutt lover

## hobbies

**professional:** data analysis, web app creation, REST API design, machine-learning, free software **personal:** piano, embedded electronic, cuisine, trails & treks

## experiences

Mar 2010–Nov 2010 **Xone Technologies**  
Software Developer Intern

Dakar, Senegal

- Creation of connectors that would translate protocols used by external systems into HTTP requests.
- Creation of a task scheduler, based on REDIS, that would pop a FIFO queue and process requests.

Dec 2010–...**GULFSAT MADAGASCAR**

Antananarivo, Madagascar

*Research & Development Chief Officer*

I am responsible for pre-production projects, creating and enhancing products (internal or external).

As Gulfsat Madagascar is the exclusive contractor of Blueline Madagascar (ISP), I work a lot on interfacing technical resources.

- **Designing a cluster serving APIs: SOAP, REST, SMPP, etc. ; dealing with multiple requests per second**
  - fully coded in Python: I worked on interfacing equipments and databases engines related to DVB-T and VoIP services
    - \* high-availability APIs processing requests to Conditional Access Systems
    - \* creation of class methods handling subscriptions (packages, management, etc.)
  - Do Not Repeat Yourself proof code, clear and documented
    - \* hard work on differentiating HTTP verbs and using them right
    - \* creation of a standard for every function's return
- **Installing a cluster for multimedia broadcasting**
  - nation wide project consisting in deploying servers containing static multimedia content for broadcasting on DVB-T/T2
  - I entirely coded the file manager in Python: file synchronisation, file renaming, file broadcast, etc.
  - interactions with each server is possible through a REST API
- **Traffic forecast by analyzing CCTV snapshots**
  - creation of a Celery script for tasks scheduling: image acquisition via GET, image processing with PIL, deletion of images stored frequently
  - resources are publicly accessible through a REST API powered by Flask
  - handling road traffic data with OpenCV
- **Designed and installed a DVB-T2 network**
  - scouting for constructors providing flexible and reliable hardware for head-end
  - interfacing head-end equipments for integration in our information system

## education

2008–2010 **Master (engineer) in Telecommunications**

ESMT, Dakar

Strong notions on waves physics, computers architecture, routing and commuting algorithms

2007–2008 **License in Engineering Sciences**

ESMT, Dakar

Curriculum based on electrocinetic, automatic and computer sciences

2005–2007 **Classes Préparatoires**

Collège Sacré-Coeur, Dakar

Specialization in Physics