

# David Hagege

## Senior Software Engineer / Code Janitor

✉ david@joynetiks.com 🌐 <https://github.com/pcboy> 📍 Shinjuku, Tokyo, Japan

### About

As a KISS Developer with a passion for innovation, I am dedicated to building projects that make a positive impact on people's lives. I believe that the key to successful software development is controlling complexity, and I strive to create the simplest solutions possible for the most complex problems. With 17 years of experience building applications, I am proficient in front-end, back-end, and DevOps. I can also develop mobile apps and hardware-based solutions. My creativity and entrepreneurial spirit are constantly fueling new start-up ideas that I am excited to bring to life.

### Work Experience (17 years)

#### Joynetiks

2020-07-01 — (5 years 2 months +)

##### Founder

<https://joynetiks.com/>

Extraordinary Software Development Services

##### Highlights

- Joynetiks provides top-notch software development and consulting services to companies of all sizes, with a focus on bringing Joy to everyone involved.

#### Listenfield Inc.

2021-03-01 — (4 years 6 months +)

##### CTO

<https://www.listenfield.com/>

Agritech: Integrated Predictive Agronomic Platform (~40 people start-up, multi-cultural ~12 nationalities). Building the Gitlab for Farmers, working with satellite images to estimate farmers fields' health, production, and when their crops will bloom.

##### Highlights

- Led the development of a mobile app + dashboard with over 40,000 users, serving farmers and agronomists
- Radically changed how the organization was working by promoting maximum Gitlab use and asynchronous communication for everyone. Gone from multiple meetings a day to around one meeting a week.
- Introduced the company to Nix/NixOS, establishing it as the standard for both development environments and deployment processes across different teams.
- In my first month, I also reduced the number of company's repositories by 90% and redesigned the infrastructure to minimize the use of microservices
- Led the redevelopment of a 4 years old mobile & web app in 5 months, including the successful migration of existing users.
- Built a scalable pipeline using PubSub & cloud functions for satellite image fetching (100,000+ images/day) and worked closely with researchers to ensure the success of our projects
- Constantly improved SQL queries to work with large amount of data (multi-million-row tables)
- Reviewed all team members' code for a minimum of 4 hours each day, providing constant feedback and suggestions.
- Built an extensive employee handbook using Hugo, providing a one-stop resource for new hires and a comprehensive documentation hub for the entire company

#### Zeppelin

2020-07-01 — 2020-12-01 (5 months)

##### Lead Engineer (Freelance work)

<https://www.zeppelin.co.jp/>

AR mobile apps / shopping platform

##### Highlights

- Implemented robust development processes, including CI and testing, to improve efficiency and code quality on a previously disorganized project.
- Initiated the migration from Firestore to SQL on GCP (contributing to firebase in the meantime), successfully designed and built the entire backend for the app.
- Guided and mentored other engineers in making informed decisions and delivering high-quality work.

## Persol Career / BRS

2019-05-01 — 2020-06-30 (1 year 2 months)

### Technical Lead

<https://www.persol-career.co.jp/>

Japanese HR company that operates Doda.jp. As the tech lead of their HR Tech team, I was responsible for modernizing their systems.

### Highlights

- Developed a chrome extension that significantly improved the efficiency of recruiters and saved the company millions of yen.
- Identified and remedied multiple security vulnerabilities in the company's servers and processes.
- Set up and supervised Kubernetes clusters with Terraform on GCP to provide easy deployment of all their services. Implemented SSO to protect their services.
- Created a new website from scratch using React and Rails with Elasticsearch integration, providing a faster and more effective search experience that was fully synchronized with the company's Salesforce system.
- Made all technical decisions and adhered to really strict compliance regulations.
- Introduced automatic testing for the engineering hiring process, resulting in a 80% reduction in the number of applicants and saving hours of interview time.

## En-Japan

2014-12-01 — 2019-05-01 (4 years 5 months)

### Software Engineer

A famous Japanese HR company. Scala and ruby on rails development.

### Highlights

- Worked on Vibe.work, a tool to analyze your team's morale with machine learning.
- Developed a highly popular team building platform called <https://ludo.team>, which continues to have over a thousand active users per month and has attracted clients such as Electronic Arts and BestBuy.
- Implemented an RPA solution that saved the company nearly 1 million USD annually.
- Mentored coworkers in Ruby on Rails and provided programming instruction to non-technical team members.
- Created ensalator, an open source tool for generating AWS CloudFormation templates, saving hundreds of hours of DevOps work within the team.
- Developed web crawlers to efficiently crawl and index hundred thousands of job postings from across the web.

## Orange labs Tokyo/Seoul

2012-06-01 — 2014-12-01 (2 years 6 months)

### Research Engineer

Orange, the third largest telecom company in Europe. I had the opportunity to work in their labs in Tokyo and Seoul for a total of two and a half years.

### Highlights

- Developed Android apps with a Scala frontend and Ruby backend.
- Utilized a Kinect sensor to track consumer behavior and gather data on in-store customers.
- Designed and implemented a hot desk system using mobile phones, wireless charging, and Miracast technology. Had to hack my own Android ROM to make it work seamlessly.
- Worked on a solution for remotely controlling Android phones for technical support purposes.

## Myndpage

2011-02-01 — 2012-02-01 (1 year)

### Founder

Myndpage is a unique social network of brains that allows users to connect based on shared thoughts and ideas, using tags to identify like-minded individuals.

### Highlights

- Achieved to get Angel investor funding from France & Dubai

## LaCie (Seagate)

2008-01-01 — 2010-04-01 (2 years 3 months)

### Software Engineer

<http://lacie.com>

Now owned by Seagate. Storage solutions, hard drives, NAS and accessories.

### Highlights

- Performed cross-platform development in C and C++ for Network Attached Storage (NAS) and Direct Attached Storage (DAS) systems on Linux, OSX, and Windows.
- Created a multi-user interface for managing LaCie's encrypted DAS devices with biometric recognition.
- Ported a NAS management software to Linux.
- Conducted a complete rewrite of a tool for formatting hard drives in various scenarios, including the introduction of a new capsule file system with LaCie manuals and tools.

## Novo Nordisk Laboratories

2008-01-01 — 2008-03-01 (2 months)

### Software Engineer (contract)

Famous Pharmaceutical company. Cross-platform development in Python 2.4 of a child growth hormone prescription application used by physicians.

## Oxalide

2007-07-01 — 2008-01-01 (6 months)

### System admin trainee

Now one of the biggest Web Hosting company in France. Managing servers and developing new tools for clients.

## Personal Projects

### CPAPShare

An automated CPAP data sharing system using Orange Pi Zero 2W - detects SD card insertion, backs up sleep data, and syncs to desktop for analysis

### Ncypher

A gem/cli tool to help you AES encrypt your credentials in your apps.

### An Hydroponics controller (ESP32)

A controller for hydroponics systems checking PH & PPM in nutrients solutions and starting water pumps at regular intervals. Supports OTA updates.

### g81\_relative

A tool for converting Marlin (3D printer firmware) bed leveling absolute results to relative ones, widely used in the 3D printing community.

### A Smart Coaster

A coaster that uses a pressure sensor to track the number of drinks consumed in real-time via Bluetooth LE and an ESP32. I designed the PCB and 3D printed the coaster myself

### Timetr4cker

A simple time tracking app for freelancers with timesheet PDF generation with a simple CTRL+P.

### Freelancer-buzzer

A magical button that sends a request to a specified URL when turned on and another URL when turned off. Used in conjunction with Timetr4cker to manage work hours.

### Sourdough starter controller

An ESP32 and laser distance sensor connected to Grafana and InfluxDB to monitor the growth of a sourdough starter.

### Aircon-controller

Controlling my AC from anywhere on the planet with an esp32 & an IR emitter

### Pixmory

Language Learning Hack Tool. Pixmory is generating flashcards from/to any language with pictures, pronunciation (sound+writing), and sample sentences.

### adb-insecure-patcher

A tool to enable adb as root on Android on any ROM.

### Alonexec

A self-extractable binaries generator in C. It's 'packing' executables with all its dependencies (e.g shared libraries, resources, ...)

## Many open source contributions (e.g NixOS's nixpkgs, Google Firebase...)

See my github

## Skills

### DevOps

Linux (NixOS, Gentoo, Arch, 24 years exp) CI/CD GCP AWS PubSub CloudRun Kubernetes Terraform  
Serverless Traefik Gitlab Helm Caddy Docker Plan9

### Frontend

Svelte React Mobx Typescript Tailwind HAML Sass CSS3 Firebase d3.js Responsiveness GTK Qt

### Backend

Ruby on Rails Postgresql/PostGIS/PGVector GEE NextJS Elasticsearch Express Sequelize Memcache Sidekiq  
RSpec Grafana Zsh MQTT Scala Redis InfluxDB RabbitMQ Make C C++ Vim

### Hardware

PCB design CAD Arduino ESP32 ASM 3D Printing

### Mobile

Android SDK NDK Firebase

### Security

PE infector in asm x86 Buffer overflow exploitation ROP gadgets (ASLR bypass) SQL injection XSS/CSRF

## Languages

#### French

Native speaker

#### English

TOEIC 910

#### Japanese

ILR Level 2

#### Korean

ILR Level 1

#### Spanish

ILR Level 1

## Interests

Hydroponics and self-sufficiency

Cryptography, Open Source and the Cypherpunk movement

Electrical engineering, Hardware reverse engineering, PCB design, 3D printing, CAD, building keyboards

Sourdough bread making, Cheese Making, curing meat, and cooking in general

## Education

#### Epitech - European Institute of Technology

 Master of Engineering

2006 - 2011