



Sébastien Aoki (青木セブ)

Full-Stack Software engineer

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Software engineering licence, with honours at "IUT de Valence" (France)

I have 20 years of experience in designing and developing software, including the **design phases, frontend, backend and infrastructure**.

By thinking ahead, paying attention to all details and challenging the status-quo, I quickly deliver software with little to no bugs or long-term maintenance costs.

I can also handle complex refactoring or optimization work.

I live in Nishi-Tokyo, am native from **France** and can fluently speak **English** and **Japanese**

My free time is mostly spent on fatherhood and indie game development.

Education

Software engineering licence, with honours at "IUT de Valence" (France)

Skills

Frontend

JavaScript • TypeScript • React • HTML • CSS • OpenGL • GraphQL • jQuery • Bootstrap • Foundation • VueJS • Redux • Playwright • Cypress • MUI • Progressive Web App • WebExtensions

Backend

Go • JavaScript • TypeScript • SQL • GraphQL • Node.js • PHP • JSON Schema • OpenAPI (Swagger) • Bash • PHPUnit • Jest • Laravel • Jasmine • NestJS • FuelPHP • Java • Vite

Databases

SQL Server • PostgreSQL • MySQL • Redis • Elastic Search • SQLite • RabbitMQ

DevOps

Linux • Docker • Bash • AWS • Terraform • Kubernetes • Github actions • CircleCI • Nginx

Tooling

Git • Vim • Bash • Inkscape • Gimp

Game dev

OpenGL • Maths (2D/3D) • C++ • ImGui

Experiences

Shippio (June 2025 - Ongoing)

Frontend engineer

B2B service about the logistics of transporting goods

JavaScript TypeScript React MUI Apollo Client Redux Vitest Playwright

- Analyze the specifications and lead the design phase (frontend and backend)
- Implement the frontend side of features while cooperating with the backend team
- Unit and e2e testing using Vitest and Playwright
- Refactoring legacy code and upgrading the quality of the codebase

Shippio (April 2024 - May 2025)

Senior infrastructure & DevOps engineer

B2B service about the logistics of transporting goods

AWS CDK Terraform OpenTofu Docker PostgreSQL Bash Github actions Active Pieces ByteBase Redash DataDog Go
JavaScript TypeScript Auth0 FireBase Git Linux SQL ShapeUp Vim

- Manage and improve the security of the infrastructure
- Refactor existing IaC code
- Add new IaC (OpenTofu) code for manually managed infrastructure
- Implement and improve code deployment pipelines (CI)
- Monitoring and optimization of databases
- Managing the security of the AWS resources and networks/VPCs
- Analyzing use-cases and choose/install better tooling

Astral Divide (January 2022 - Ongoing)

Indie game developer

Developing an indie 2D video game

Go OpenGL Maths Inkscape Gimp C Bash Linux Vim Git Kanban

- Design and development of an indie video game
- GPU rendering with a customized pipeline using OpenGL (shaders, blending...)
- Keeping a maintainable code architecture
- Implementing algorithms for procedural generation of various gameplay elements
- Researching various data structures to organize the data with a minimal performance and memory footprints
- Drawing my own graphical assets using InkScape
- Designing and writing an Immediate Mode GUI based on OpenGL

Abbeal

AXA (January 2024 - March 2024)

Full-stack engineer

Internal tools to manage risk assessment processes

Node.js Jest TypeScript Sequelize Fastify Passport React React-Query Vitest SQL MySQL SQLite Windows Jenkins Vim
Git

- Helped debugging a new internal application

Les Grands Crus (October 2023 - December 2023)

Tech-lead

Public opening of an API about wine trading

Node.js TypeScript Express Jest Passport OpenAPI (Swagger) MongoDB Heroku CircleCI Linux Vim Git Kanban

- Analyzed existing codebase and architecture
- Made plans to increase the quality and reliability of the codebase
- Converted the codebase from raw JS to strict TypeScript
- Switched the codebase to a 3-tier architecture with a validation layer
- Introduced unit tests

Shippio (October 2022 - August 2023)

Tech-lead

Orchestration of crowd-sourced scraping tasks

Go SQL PostgreSQL Docker Google APIs (Spreadsheets, Drive) AWS (S3, ECS, StepFunction, CodeDeploy) Terraform
Waterfall Serverless CircleCI Bash Linux Vim Git AG Grid

- Analyzing existing codebase, architecture and customer satisfaction
- Making plans to increase the quality and reliability of the system
- Migrated the codebase to a 3-tier architecture
- Refactored a codebase of spaghetti code without impacting the service

- Analyzed existing constraints and migrated a custom cron system to a StepFunction workflow, running CLI commands in Docker containers
- Improved the Git workflow and deployment process, including CI checks (lint, unit tests)
- Managing the process of merging two separate teams and organizations together
- Planning and estimating the tasks
- Documenting the architecture to onboard new developers

MonstarLab

Satos (September 2021 - August 2022)

Backend developer

Cryptocurrency marketplace

Node.js NestJS Jest TypeScript Docker AWS (S3 ECS, ECR, Batch, CodePipeline) Terraform SQL PostgreSQL RabbitMQ
CircleCI Linux Vim Git OpenAPI (Swagger) Scrum

- Analyzing third-party API specifications
- Designing a database that ensures financial data integrity and safety
- Designing an event-driven architecture with micro-services
- Specifying flow diagrams for complex trading operations
- Implementing various trading processes in a way that ensures the quality and integrity of the transactions, in a distributed and asynchronous environment.
- Analyzed available solutions and settled on an event-driven approach using RabbitMQ
- Migrated from MySQL to PostgreSQL to make use of its more powerful capabilities
- Implemented various infrastructure components on AWS using Terraform
- Planning and estimating the tasks and sprints

NicoNico Channel+ (November 2020 - February 2022)

Back-end lead

Implementing a high-traffic live-streaming video platform

Go GraphQL Node.js TypeScript Express Socket.IO Jest Docker Kubernetes Helm AWS (EC2, S3, EKS, ECR) SQL MySQL
Github actions Bash Linux Vim Git Waterfall

- Designing and maintaining the architecture of a codebase under intensive development
- Delegating responsibilities to ensure the productivity
- Designing the codebase architecture to ensure future maintainability and security
- Developing the Kubernetes infrastructure
- Developing the Docker files for Go (based on the scratch image)
- Developing CI automations (testing, deployment, code style)
- Synchronizing a team of about 50 people
- Synchronization between the system engineering team and the implementation team
- Helping communication in a multilingual and multicultural team
- Helping the system engineers to design the database and API specifications in a secure and maintainable way according to the constraints of the implementation side.
- Cooperation and coordination with the frontend team

RODB (January 2021 - March 2022)

Open source developer

Static database/micro-service generator

Go Docker (Compose, Dockerfile, Buildkit) JSON Schema Jekyll CSS (Sass) HTML 5 Github actions Github pages SQLite Bash
Linux Vim Git XML Kanban

- Implementing an open source project
- Studying and implement various indexation techniques
- Writing a complete technical documentation and website
- Designing the codebase architecture for a service with unique constraints

Kanjimi (March 2019 - July 2021)

Solo developer and entrepreneur

Failed business attempt about a Japanese learning SAAS tool

Node.js Express VueJS TypeScript CSS (Bootstrap) SQL PostgreSQL WebExtension Progressive Web App Docker

Github actions Kubernetes (Digital Ocean) Git Bash Nginx Linux Vim Kanban Jasmine

- Designing and developing a REST API using Node.js, Express and TypeScript
- Developing a tokenizing algorithm for Japanese texts
- Parsing, converting and optimizing the performance and memory footprint of hundreds of megabytes worth of dictionary data
- Graphically designing and implementing a frontend
- Developing and open-sourcing an ORM package (Kiss-ORM)
- Developing, automating and testing a browser extension for Google Chrome and Firefox
- Making the application available as a Progressive Web App
- Unit and e2e testing using Jasmine and Cypress
- Horizontally scalable cloud infrastructure using Kubernetes on Digital Ocean
- Local development stack using Docker-Compose
- Writing docker files
- Various Bash scripting
- Studying the legal side of hosting data, copyright rules, privacy policies, contracting (terms and conditions).

HiVelocity (January 2019 - October 2020)

Full-stack tech-lead

Full-featured multi-tenants platform to create and manage event-related websites (manga-cafes, concerts...).

PHP 7 Laravel PHPUnit PHPStan SQL MySQL SQLite Cypress CircleCI Github actions Git Docker Redis Bash Nginx Vim

Kanban

- Porting and modernizing features from legacy CMS and ecommerce apps
- Implementing a multi-tenants architecture that automatically generates websites
- Heavily refactoring code to a modern 3-tier architecture (controller, service and repository layers using a data-mapping design)
- Implementing and separating the concerns in micro-services
- Adding and implementing multiple layers of testing (PHPUnit and Cypress)
- Developing and then porting (from CircleCI to GitHub actions) a complex CI pipeline to automatically test, deploy, statically analyze code and check the code style.
- Writing and maintaining Dockerfiles and related scripts, as well as the Docker-Compose stack.
- Tech-leading the team
- Code-reviewing
- Helping the team to grow by improving the company processes and standards

SBT - Human Matters (September 2018 - December 2018)

DevOps engineer

AppStore-like application and CI automations for services related to mental-health care.

JavaScript TypeScript Node.js React Redux (Rematch) Electron Cordova GitLab CI Docker PostCSS Bash Git SVN Windows

Vim Kanban

- Analyzing the status of the existing legacy application
- Making technical recommendations to the customer to ensure future maintainability
- Porting and implementing it in a new stack
- Support for the legacy application library inside the modern codebase
- Developing a CI process to fully automate the building and deployment of the application
- Making sure that the application works on various devices using Cordova and Electron

Novius

Cinemas Lumière (June 2018 - July 2018)

Full-stack developer

Website to manage and show the planning of cinemas

PHP 5.6 FuelPHP 1.7 SQL MySQL CSS (Sass, Foundation 6) JavaScript (ES6) JQuery GitLab CI Cypress Xpath Git Bash Nginx

Linux Vim Scrum

- Writing functional and technical specifications
- Database design
- E2E tests using Cypress
- Cooperating with the PM on analyzing the customer's requirements

- Planning and estimating the tasks and sprints

Cité de la céramique de Sèvres (February 2018 - March 2018)

Full-stack tech-lead

CMS-based website to showcase the contents of the museum

PHP 5.6 FuelPHP 1.7 SQL MySQL JavaScript (ES6) jQuery CSS (Sass, Foundation 6) GitLab CI Cypress Git Bash Nginx Linux Vim Scrum

- Writing functional and technical specifications
- Database design
- Reviewing code
- E2E tests using Cypress
- Automating the deployment using Bash scripts
- Setting-up various automations using GitLab CI
- Tech-leading the team
- Cooperating with the PM on analyzing the customer's requirements
- Planning and estimating the tasks and sprints

RSA Cosmos (October 2017 - February 2018)

Backend Tech-lead

REST API for a software used by many museums and planetariums world-wide

PHP 7 Laravel 5.5 PHPUnit AWS (S3) SQL MySQL 5.7 SQLite Elastic Search 5.6 GitLab CI Bash OpenAPI (Swagger) JSON Schema 'JSON:Api' ReDoc Git Nginx Linux Vim Scrum Docker

- Writing technical specifications and an OpenAPI documentation based on customer requirements
- Database design
- Designing a clean architecture with end-to-end tested endpoints
- Implementing the API
- Reviewing code
- File upload system scalable to hundreds of Gigabytes using AWS S3
- Full e2e testing of the endpoints using PHPUnit
- Automating the deployment using Bash scripts
- Setting-up various automations using GitLab CI
- Tech-leading the team
- Cooperating with the customer's development team to find requirements and help integrating the API
- Planning and estimating the tasks and sprints

OFAJ (April 2017 - December 2018)

Full-stack tech lead

Platform to promote intercultural exchanges between France and Germany.

PHP 5.6 FuelPHP 1.7 SQL MySQL JavaScript (ES6) jQuery CSS (Sass, Foundation 6) Elastic Search 5.6 GitLab CI Bash Cypress Git Nginx Linux Vim Scrum

- Writing functional and technical specifications, including permissions management, multi-language contents, data-versioning and moderation features
- Database design
- Reviewing code
- Developing and maintaining open source addons for a custom CMS.
- E2E tests using Cypress
- Automating the deployment using Bash scripts
- Setting-up various automations using GitLab CI
- Tech-leading the team
- Cooperating with the PM on analyzing the customer's requirements
- Planning and estimating the tasks and sprints

Mylan Meilleure Santé (June 2016 - December 2016)

Full-stack tech-lead

Platform providing services such as a medication calendar or taking online appointments.

PHP 5.6 FuelPHP 1.7 SQL MySQL JavaScript jQuery CSS (Sass, Foundation 5) Grunt Bash Git Nginx Linux Scrum

- Writing functional and technical specifications
- Database design
- Reviewing code
- Implementing strong regulatory privacy rules about handling medical data
- Automating the deployment using Bash scripts
- Setting-up various automations using GitLab CI
- Tech-leading the team
- Cooperating with the PM on analyzing the customer's requirements
- Planning and estimating the tasks and sprints

Gouiran Link (April 2016 - June 2017)

Full-stack Tech-lead

B2B and multi-tenant B2C platforms providing hair and beauty salons tools

PHP 5.6 FuelPHP 1.7 SQL MySQL JavaScript (ES6) React Redux Immutable.js CSS (Sass, Foundation 5) Elastic Search 2.6
 Webpack Bash Git Nginx Linux Vim Scrum

- Writing functional and technical specifications
- Database design
- Reviewing code
- Developing and maintaining open source addons for a custom CMS.
- Automating the deployment using Bash scripts
- Setting-up various automations using GitLab CI
- Tech-leading the team
- Cooperating with the PM on analyzing the customer's requirements
- Planning and estimating the tasks and sprints

Theotokos (November 2015 - May 2017)

Full-stack tech-lead

Dating WebApp of about 50k users

PHP 5.6 FuelPHP 1.7 SQL MySQL JavaScript jQuery Elastic Search 2.3 CSS (Sass, Foundation 5) Grunt Bash Git Nginx
 Linux Vim Maths Scrum

- Writing functional and technical specifications
- Database design
- Reviewing code
- Designing and implementing a matching and ranking algorithm between profiles by analyzing the existing data and user behavior.
- Developing and maintaining open source addons for a custom CMS.
- Automating the deployment using Bash scripts
- Setting-up various automations using GitLab CI
- Tech-leading the team
- Cooperating with the PM on analyzing the customer's requirements
- Planning and estimating the tasks and sprints

Gerflor (September 2015 - April 2018)

Full-stack developer

Maintaining and adding features to a multilingual website

PHP 5.6 FuelPHP 1.7 SQL MySQL CSS (Sass) JavaScript jQuery Bash Nginx Linux Git XML Scrum

- Fixing existing code
- Adding new features
- Multilingual website and contents

GlitchyVerse (2013 - 2015)

Indie game developer

3D space video-game

JavaScript Maths WebGL Go HTML 5 Gimp Wings3D Git SQL SQLite Linux

- Developing and designing a 3D engine from scratch based on WebGL (OpenGL ES 2.0)
- Using geometry-related mathematics, matrices, quaternions

- Software architecture
- Low-level optimization
- Drawing 3D models using Wings3D
- Parsing and rendering 3D models (.obj) files

Crédit Agricole (September 2011 - August 2015)

Software & Business Intelligence developer

Developing internal applications and data reports at the Sud-Rhône-Alpes branch

PHP HTML CSS JavaScript jQuery SQL Transact-SQL MySQL SQL Server Access VBA Windows Server Business Objects
Laravel Git XQuery Apache IIS SOAP Linux Jenkins XML Waterfall

- Analyzing business requirements, writing functional and technical specifications as well as wireframes
- Database design
- Estimating and planning projects
- Developing various internal applications using PHP
- Analyzing and extracting data for BI and regulatory purposes, via GUI tools and SQL
- Complex and multi-server SQL queries using SQL Server and Transact-SQL
- Interfacing modern applications with the legacy mainframes using ActiveX APIs
- Maintaining and backing up the application servers using PHP, MySQL and IIS on Windows Server

CNES & IUT de Valence (April 2010 - July 2010)

Full-stack developer

Developing the ground station for sending a probe balloon in the stratosphere, with live tracking and telemetry

Java HTML CSS MongoDB XML Google Earth (KML) C++ Linux

- Receiving, parsing radio signals and handling transmission errors
- Defining a common protocol among teams
- Saving and showing live data (position, temperature, pressure, altitude ...) on the website
- Live-tracking of the balloon's position using Google-Earth APIs

Mu-Intensity (November 2007 - December 2010)

Tech-lead

Private server instance of the Mu-Online video-game (MMORPG)

PHP HTML CSS SQL SQL Server Apache JavaScript Windows Server SVN C++

- Implementing a dynamic website and forum
- Interfacing the closed-source game with a custom PHP/SQL website
- Maintaining and updating Windows Server and SQL Server
- Scaling the system for 500~1000 active users at peaks
- Understanding, finding and patching lots of security vulnerabilities
- Contributing to the community management