

Fabio Cionini

Selected Projects, 2015 - 2021

SeetaLabs

<https://ai.seetalabs.com>

Position(s) : Lead Backend Developer / Co-founder

Project description

Backend infrastructure for AI services (industrial transformers health index prediction). The backend provides a REST API for the frontend with which clients can register, purchase AI services, get predictions, visualize data with charts and trend analysis tools.

Period

September 2019 / ongoing

Work carried out

System architecture: technology stack, database structure, models, migrations, REST API specifications

DevOps: server setup, optimization, maintenance. Nginx server setup.

Developers and testers workflow setup on Github and Slack: issue tracking methodology and best practices, branches and pull requests management

Backend development

REST APIs for users signup and management (roles, data ownership, notifications)

CSV/XLS data parsing and sanitization

Internal communication API with Python AI services

License management (pricing, seats, available requests calculation)

Frontend code review (Angular)

Full responsibility for the software stack

Skills

Languages: JavaScript, TypeScript, Python

Frameworks & APIs: Feathers.js, Express, Sequelize, Angular

Application servers: Node.js, Gunicorn

Web servers: Nginx

IDE: PHPStorm, PyCharm

Version management, issue and project tracking: GitHub Enterprise

Systems: Ubuntu Linux server

Methods: Kanban

Changan European Design Center

<http://www.globalchangan.com>

Position(s) : Lead Prototype Developer

Project's description

Several prototypes for car HMI (UX R&D, show cars, hardware R&D) using web and native technologies: desktop applications, mobile hybrid applications, embedded devices.

Design and development of a real-time, WebSocket based state management server for complex hybrid hardware/software systems (full cockpit with digital displays and physical interaction)

Period

December 2018 / December 2020

Work carried out

Design process: part of UX research as creative technologist, determining UX/UI design directions as a result of technical research and development.

System architecture: technology stack, software specifications, complex systems design

Frontend software development on design specifications and mockups (Sketch, XD) mostly with Ionic and Angular, creating mobile and desktop applications.

Smart watch application development for Samsung Tizen devices.

Research and development on applications to control LED arrays and lighting equipments (C++/ OpenFrameworks, Arduino)

R&D on hardware integration with embedded devices (Arduino/Teensy boards, physical controls), in-car serial communication (OBD2, CAN Bus) to get car data in real time (speed, RPM, other car functions)

Backend development: a Node.js socket based (Socket.IO) state management server that enables communication and real time status update of different software systems connected to the same network. The server also enabled two-ways interaction between these software systems and several hardware devices that are part of a car cockpit.

Skills

Languages: JavaScript, TypeScript, C++, Python

Frameworks & APIs: Angular, Ionic, Tizen Web, Socket.IO

Application servers: Node.js

IDE: PHPStorm, Xcode, Visual Studio, PyCharm

Version management, issue and project tracking: GitHub, GitLab, RedMine

Systems: macOS, Windows, Raspberry Pi Linux, Android, iOS

Methods: Agile, Kanban

Engage Works Ltd. - London, UK

<https://engageworks.com/>

Position(s) : Head of Development

Project description

At Engage Works I had the role of Head of Development, which was not hands-on on software (with exceptions for some C++ and iOS applications, system integration and CI server), dealing mostly with team management, clients and board reporting, having full responsibility for software delivery and being involved in projects design (both internal and external), technology stack choice, budgeting, team allocation, evaluating new team members and contractors, following software development and delivery in all stages, going on-site (UK, Italy, Dubai) to clients for meetings and deploy.

Example projects

Dubai Prime Minister: https://engageworks.com/case_studies/edge-of-government/

EY Collaboration Centre: https://engageworks.com/case_studies/ey/

Sky Academy: https://engageworks.com/case_studies/sky-academy/

Period

December 2015 / August 2017

Work carried out

Development team leading, mentoring junior developers

Interview, hire new team members and contractors

System architecture: technology stack, project specifications

Projects budgeting, team allocation, scheduling

Client relationship: defining project specifications, on-site team management, installation deploy, assistance

Full responsibility and reporting to board of directors on software projects

Software review (GitLab)

Continuous integration server (Jenkins) setup and maintenance.

Native C++ / Objective-C development (iOS)

Direct daily standup meetings

System integration on complex projects

Skills

Languages : C#, C++, JavaScript, Objective-C

Frameworks & APIs : jQuery, .NET, WPF, OpenFrameworks

IDE : Xcode, Visual Studio, PHPStorm

Version management, issue and project tracking : GitLab

Continuous Integration: Jenkins

Systems : macOS, Windows, iOS

Methods: Kanban, Agile

Paratissima / PRS

<https://artgallery.paratissima.it>

Position(s) : Lead Full Stack Developer

Project description

Paratissima Art Gallery is a contemporary art marketplace. Artists can register and their art works will be evaluated and sold on this e-commerce platform in limited editions. Clients on the other hand can browse, search and buy the art works if still available.

The platform also features selected artworks from Paratissima, one of the most important art fairs in Italy in terms of visitors.

Period

March 2018 / August 2018

Work carried out

System architecture: technology stack, database structure improvement (existing MongoDB), REST API specifications

Integration with the artists and artworks content management system, which was on a different, existing web application done in React.

React development to integrate new features on the old CMS.

Backend development in Node.js and Feathers.js (REST + WebSocket APIs).

Frontend development in Angular from designer's partial static HTML/CSS implementations.

Real-time availability of artworks: clients buying limited editions (often few copies or just one) must begin the transaction knowing the availability in real-time. This is done using a custom store management system that uses WebSocket to update availability.

Integration of several payment systems (PayPal, Credit Card, Satispay).

Skills

Languages: JavaScript, TypeScript, C++, Python

Frameworks & APIs: Angular, React, Feathers.js, Express, Socket.IO, Mongoose, PayPal API, Satispay API

Application servers: Node.js

Web Server : Nginx

IDE : PHPStorm

Version management, issue and project tracking : GitHub

Systems : macOS, Windows, Linux

Methods : Kanban

Pindarica Theatre Multimedia Edutainment

<https://pindarica.net/progetto-peter-pad/>

Position(s) : Lead Full Stack Developer

Project description

Peter Pad is an educational project that aims to teach young students (secondary and early high school) the characteristics and the dangers of social networks, especially in terms of faking identities. It is a real-time chat game: the students are assigned one iPad each and the identity of another student. They must act as if they were this other student and chat with another random one, trying to fool her/him into believing the fake identity. The same happens on the other side... This is done on a client/server web application running on the local network. The game is set up, initiated and managed on a dashboard / control panel by the teacher.

Period

August 2017 / November 2017

Work carried out

Game design, creative technologist

System architecture: technology stack, database structure, backend specifications

Backend development (local Node.js, Socket.IO based server with MongoDB data storage)

iPad web application UI design and development (Vue.js). Real-time chat application whose UI mimics iOS Messages and Facebook Messenger.

Control panel development (also Vue.js): the teacher can import the student list and create the two teams, assigning them fake identities; she can also control all the game phases, check the winners, and send broadcast messages to all students to suggest topics to talk about or to wrap up the game.

The full system could run on a Raspberry Pi 3 and a router for maximum portability when touring schools.

Skills

Languages : JavaScript

Frameworks & APIs : Vue.js 2.x, Vuex state management, Mongoose, Socket.IO

Application servers : Node.js

IDE : PHPStorm, WebStorm

Version management, issue and project tracking : GitHub

Systems : macOS, Windows, Raspberry PI Linux

Methods: Kanban

TODO interaction design / Museo Egizio di Torino

<http://egizio2015.todo.to.it/>

Position(s) : Lead Backend Developer

Project description

As part of a big campaign for the restoration of the Museo Egizio, the world's second biggest Aegyptian museum, TODO provided, among others, a website with a live-streaming interactive experience in which people from all over the world could, using their computer's microphone, "blow" the sand out of a real egyptian find that was installed in the Museum by remotely controlling a robot arm and a fan: first they had to select a point to blow on, then blow on the microphone to activate the robot arm that would reach the point and blow the fan. A real-time video streaming showed the user the unveiling of the find on the exact point they indicated.

Period

February 2015 / April 2015

Work carried out

System architecture: technology stack, database structure, API specifications

Backend development (Node.js, Socket.IO based server with MySQL data storage)

Queue management system: people could sign up using Facebook, Twitter or Google and wait for their turn to control the physical robot arm remotely.

The queue system had to take care of people leaving, streaming issues, hardware failures.

Linux server setup, optimization, maintenance.

Frontend integration with server APIs and video streaming platform.

Skills

Languages: JavaScript

Frameworks & APIs: Socket.IO, social network APIs (Facebook, Twitter, Google), Sequelize

Application servers: Node.js

IDE: PHPStorm

Version management, issue and project tracking: GitHub

Systems: macOS, Windows, Linux

Methods: Agile, Kanban