

# Émilien BAI

Blockchain / Fullstack Engineer

## About

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Deutschland

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Driving License  
International Mobility

## Languages

French Mother Tongue  
English Advanced  
(TOEIC 970/990)  
German Intermediate (B1)  
Swedish Notions

## Programming

Python, Typescript,  
Solodity, NodeJs,  
Java, C#, C/C++,  
Shell, SQL, OpenGL  
(basics)  
Arduino

## Diverse

Linux, Windows,  
Eclipse, IntelliJ Idea  
NetBeans, Android Studio,  
Visual Studio,  
L<sup>A</sup>T<sub>E</sub>X, Git, SVN

## Education

2014..17	<b>Computer Science and Engineering student</b> Theatrical technician option	INSA Lyon
2016..17	<b>Exchange student</b> Computer science program and Swedish courses	Luleå University of Technology
2012..14	<b>Undergraduate program in sciences engineering</b> Theatrical technician option	INSA Lyon
2012	<b>French Baccalauréat S with honors</b> Specialization in mathematics and physics	Lycée Champagnat (69)

## Experiences

09 2017 - ...	<b>3dTrust GmbH, München, DE</b> Blockchain / Fullstack Developer	<ul style="list-style-type: none"><li>Active participation in the design of the Blockchain/smart-contracts architecture part of our application. This blockchain part is grafted on top of an existing application and aimed at securing and guaranteeing the consistency of sensitive data.</li><li>Development of a scheduling algorithm to automate production planning. This algorithm has been integrated in the final product, a production monitoring and management system oriented at additive manufacturing.</li><li>Implementation of a link between the existing application and a newly created blockchain architecture.</li></ul>
02-06 2017	<b>Luleå University of Technology, Luleå, SE</b> Research Intern	<ul style="list-style-type: none"><li>Design and implementation of a reward system for collaborative care of elderly. The goal was to design from scratch a system to motivate potential volunteers to bring help to elderly people.</li><li>Development of a back-end based on smart-contracts using distributed ledger technologies and a mobile application as a blockchain "wallet". The use of a blockchain was a requirement in the internship subject. I developed my entire back-end using Burrow, the blockchain solution from Monax, a fork of Ethereum using Solidity as the smart contract development language.</li><li>Publication of a research paper in the conference proceedings of UBICOMM 2017 (Barcelona, November 2017).</li></ul>
05-08 2016	<b>Foxstream, Vaulx-en-Velin, FR</b> Software Engineer Intern	<ul style="list-style-type: none"><li>Update of Foxtool, software used for CCTV camera placement simulation.</li><li>Creation of cameras point of view 3D simulation using C#, OpenTK and GLSL.</li><li>Refresh of the global architecture of the application by the inclusion of common design patterns in the existing version.</li><li>Refresh of FoxTool UX then GUI using Winform.</li></ul>
May 2016	<b>INSA Lyon, FR</b> Group project "Potholes"	<ul style="list-style-type: none"><li>Creation of a working prototype of an embedded system using sunspot sensors and a raspberry pi.</li><li>Automatic detection of roads imperfections (potholes) and data collection. Data is automatically sent to a server to be analyzed.</li><li>Entire development in a 10 days sprint with 5 other students.</li></ul>
06-08 2015	<b>XLR Project, Lyon, FR</b> Software Engineer Intern	<ul style="list-style-type: none"><li>Entire development of a Java application from specifications to release.</li><li>Collection of analog signals with an Arduino board then conversion into MIDI and OSC messages to create interaction with most of the creative live software.</li><li>Integration with a drum set to create an interactive video installation.</li></ul>

## Volunteer experience

- 2015-2016 **Commission de Gestion de la Rotonde (CGR)** Vice president  
Management of the theater of the campus of "la Doua" : schedule, material park management, rentals.
- 2014-2016 **Festival Karnaval Humanitaire, logistic team** Technician  
Light equipment research and gathering, assembly of the stage and the technical facilities during the festival.

## Publications

### International peer-reviewed conferences/proceedings

**"A Reward System for Collaborative Care of Elderly based on Distributed Ledger Technologies",**

*Emilien Bai and Kåre Synnes* In the proceedings of the Eleventh International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies (UBICOMM), November 12-16, 2017, Barcelona, Spain , [ed] IARIA, ISSN: 2308-4278, ISBN: 978-1-61208-598-2

## Interests

Theatrical technician : lightning for theater plays, dance shows, sound technician for concerts. Realization of short films. Amateur photographer.