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,
Solidity, Go, NodeJs,
Java, C#, Arduino

Diverse

Linux, Windows,
Pycharm, Webstorm,
Visual Studio,
LaTeX, Git, SVN,
Agile methodologies.

Education

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

Experiences

Since 09 2017   3dTrust GmbH, München, DE   Blockchain / Fullstack Developer

- Design of the Blockchain/smart-contracts architecture part of our application using Hyperledger Fabric. This blockchain part is grafted on top of an existing application and aimed at securing and guaranteeing the consistency of sensitive data.
- Implementation of the integration between the existing application (for production management and monitoring) and the newly created blockchain architecture.
- 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.

2017 - 6 months Luleå University of Technology, Luleå, SE   Research Intern

- 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.
- 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 Hyperledger Burrow, the blockchain solution from Monax,a fork of Ethereum using Solidity as the smart contract development language.
- Publication of a research paper in the conference proceedings of UBICOMM 2017 (Barcelona, November 2017) and an extended version of this paper in the International Journal on Advances in Life Sciences.

2016 - 4 months Foxstream, Vaulx-en-Velin, FR   Software Engineer Intern

- Update of Foxtool, software used for CCTV camera placement simulation.
- Creation of cameras point of view 3D simulation using C#, OpenTK and GLSL.
- Refresh of the global architecture of the application by the inclusion of common design patterns in the existing version.
- Refresh of FoxTool UX then GUI using Winform.

May 2016   INSA Lyon, FR   Group project "Potholess"

- Creation of a working prototype of an embedded system using sunspot sensors and a raspberry pi.
- Automatic detection of roads imperfections (potholes) and data collection. Data is automatically sent to a server to be analyzed.
- Entire development in a 10 days sprint with 5 other students.

2015 - 3 months XLR Project, Lyon, FR   Software Engineer Intern

- Entire development of a Java application from specifications to release.
- 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.
- Integration with a drum set to create an interactive video installation.

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

Journal Articles

"Supporting Collaborative Care of Elderly through a Reward System based on Distributed Ledger Technologies",

Emilien Bai and Kåre Synnes, The International Journal on Advances in Life Sciences, vol.10, no.1 & 2, year 2018, [ed] IARIA, ISSN: 1942-2660

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

I enjoy cycling, jogging, going to concerts, to the cinema, photography. I'm a former theatrical technician : I used to do lightning for theater plays, dance shows, or sound technician for concerts and keep a strong interest in that domain.