Tarek Awwad

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Based in France

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CURRENT POSITIONS

April 2023–present **Blockchain Consultant** Freelance

Keywords Cosmos Ecosystem, Tokenomics, Blockchain architecture

2018–present **Chief Blockchain Architect** Full time

Ki Foundation

Keywords Blockchain, DeFi, Cosmos SDK, Tendermint, Proof of Stake, Proof of Reputation, CosmWasm

PERSONAL PROJECTS

2021–present **Co-Founder**

Invicta Stake

Keywords Blockchain, Staking, Validation, dPoS

WORK EXPERIENCE

2017–2018 **Research and teaching assistant**

IUT - University of Lyon 1

Keywords UML, Java programming

2014–2018 **PhD - Computer science** Joint Ph.D thesis

Quality control in crowdsourcing systems

INSA Lyon – France and University of Passau – Germany

Keywords Crowdsourcing, machine learning, data mining, quality control, clustering, Python, Java

2014 **Engineering intern - Computer vision** 6 months

Commissariat à l'Energie Atomique CEA/LIST/LVIC - Saclay - France

Keywords SLAM, augmented reality, camera calibration, projective geometry, C++, Ogre3D

EDUCATION

2012–2014 **Engineering diploma – Computer science and electronics** Top of my class

ESIREM - Dijon - France

Keywords Network administration, security and quality, software engineering, project management

2013–2014 **Master of research – Image processing** Top of my class

University of Burgundy - Dijon - France

Keywords Geometrical modeling, image processing, information systems

2009–2014 **Engineering diploma – Telecommunications**

Antonin University - Baabda - Lebanon

Keywords Telecommunications, electronics, software engineering

TECHNICAL SKILLS

Programming and frameworks

Python, TS, JS, Go, VueJS, Bootstrap, Scikit-learn, Gensim, Seaborn, Pandas, dash ...

LANGUAGES

French (fluent), English (fluent)

Arabic (native), German (B1-level)

PUBLICATIONS

ADBIS 2019 — Tarek Awwad, Nadia Bennani, Veronika Rehn-Sonigo, Lionel Brunie and Harald Kosch, *CrowdED and CREX : Towards Easy Crowdsourcing Quality Control Evaluation*, Bled - Slovenia

Dissertation 2018 — Tarek Awwad, *Context-aware worker selection for efficient quality control in crowdsourcing*, Doctoral dissertation, INSA Lyon - France and Universität Passau - Germany

CompSac 2017 — Tarek Awwad, Nadia Bennani, Konstantin Ziegler, Veronika Rehn-Sonigo, Lionel Brunie and Harald Kosch, *Efficient worker selection through history based learning*, Turin - Italy

HASE 2016 — Tarek Awwad, Nadia Bennani, Lionel Brunie, David Coquil, Harald Kosch and Veronika Rehn-Sonigo, *Task Characterization For An Effective Worker Targeting In Crowdsourcing*, Orlando - USA

DETAILED EXPERIENCE

April 2023–present

Blockchain Consultant

Freelance

Description — As a Blockchain Consultant, I specialize in designing and architecting robust blockchain-based systems for companies seeking to leverage decentralized technologies. With a strong focus on the Cosmos ecosystem, I provide expert advisory services to guide clients through the technical and strategic aspects of their blockchain projects. My contributions range from solving the technical challenges to providing insights on token design, distribution models, and economic incentives ensuring clients achieve optimal network participation and value capture.

2018–present

Chief Blockchain Architect

Full time

Ki Foundation

Description — My 5 years journey at the Ki Foundation has encompassed diverse roles and responsibilities, spanning from foundational research and design to project management and hands-on development:

- In 2019, I spearheaded the design of a novel validator selection algorithm named Proof of Reputation (PoR), engineered to be built on top of Cosmos SDK and Tendermint. PoR's primary objective was to enhance decentralization and equitable value distribution within a blockchain.
- From 2020 to 2021, in close collaboration with the CTO, I orchestrated the launch of the KiChain. This comprehensive project encompassed tasks such as client development and testing, formulation of chain tokenomics and parameter specifications, onboarding of early ecosystem validators, node and validator setup, until the launch of both the public testnet and mainnet. Furthermore, I contributed on early Cosmos tooling like ki-monitor, ki desktop-wallet, and the ki-bridge connecting to Ethereum. Following the chain's launch, my dedication revolved around ensuring its consistent alignment with evolving dependencies and requisite business modules.
- Towards the conclusion of 2021, within a span of three months, I lead the planification and execution of the Kichain incentivized testnet challenge which totaled 1000+ entries and 100K USD in prices and more than 1 000 000 USD in delegation for winners. The network surged to accommodate a concurrent presence of over 800 active validators, marking the first real life test of Tendermint and Cosmos at this scale.
- Between 2022 and 2023, I focused on leading the work on designing Atlas, a compliant yield aggregator and AMM, native to the Ki Chain. My work consisted in writing the functional specifications of the product, building a functional PoC leveraging open source contracts and projects and reviewing both the smart contract specs and the frontend designs.
- I Continuously develop and produce on-chain and off-chain data analysis models for the various products to feed product, security and Defi decision making.
- I continuously contribute in maintaining the foundation relationships with ecosystem partners and in the evaluation, deliberation, and provision of guidance pertaining to governance proposals on multiple ecosystem chains for the foundation's in-house staking service (Klub Staking) as well as foundation delegation.

2021–present

Co-Founder

Invicta Stake

Description

Invicta stake (invictastake.com) is a professional validator for dPoS Cosmos SDK based chains. Within the Invicta team, I collaborate alongside a seasoned site reliability engineer and a proficient DeFi analyst. After launching Invicta and on-boarding my teammates into the Cosmos ecosystem, my effort were realigned across two key fronts: (i) firstly, managing relationships with delegating foundations and teams and (2) assuming a hands-on role in the development of essential tools such as crypto wallets, crypto portfolio management tools and blockchain data analysis dashboard mainly using python and TS. Invicta's delegated funds reached 18 million USD accross 3 chains. Invicta's validatoin operations concluded at the conclusion of August 2023 to focus on on-chain data analysis and web3 tooling

2014–2018

PhD - Quality control in crowdsourcing systems

Joint Ph.D thesis

INSA Lyon – France and University of Passau – Germany

Supervisors

Prof. Lionel Brunie (Lyon) and Prof. Harald Kosch (Passau)

Co-supervisors

Dr. Nadia Bennani and Dr. Veronika Rehn-Sonigo

Abstract

In the last decade, crowdsourcing (CS) has emerged as a very promising approach for obtaining services, feedback or data from a large number of people connected through the Internet, in a short time and at a reasonable cost. CS has been used in a large range of contexts, thus proving its versatility. However, the quality of the services or data provided by the workers (the ”crowd”) is not guaranteed, and therefore must be verified. This verification usually results in additional time and cost. We propose a novel approach of quality control in crowdsourcing that reduces, and in some cases eliminates, this overhead. Our approach uses a learning technique to characterize and cluster tasks, and selects, within the available crowd, the most reliable group of workers for a given type of tasks.

2014

Engineering intern - Computer vision

6 months

Commissariat à l'Energie Atomique CEA/LIST/LVIC - Saclay - France

Supervisors

Dr. Mohamed Tamaazousti and Dr. Jim Braux Zin

Description

The first part of this internship consisted in implementing an Over-Transparent-Display Augmented Reality system for driving assistance. Three component were implemented; a user tracking module, a SLAM based environment real-time scanner and a calibration system with bundle adjustment. The second part of he internship consisted in improving the theoretical part of the calibration algorithm to fulfil the client requirements. A 2D calibration process was proposed instead of the 3D calibration.

OTHER

Please refer to my personal website tarekawwad.com for more details about my technical skills, side projects, scientific talks, and other activities.