Thomas Barker

Software Development, Blockchain Stuff, Advice and DevOps

London/Stockholm/The World

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https://thomasbarker.com

https://github.com/tbarker

Sun Microsystems CERTIFIED — Java Enterprise Architect

ORACLE Certified Professional
Oracle 11*g* Administrator

Aims

My experience is mainly in fast growth start-ups, as such I am very familiar with scaling and operational challenges. I would like to use that experience to help people trying to do something new, whether in an early stage start-up or an established company striking out into a new area. I take a particular interest in retail finance, infrastructure and trust-minimised (ex. blockchains, onion routing, etc) systems.

Skill Areas

Web Development   Developed code for three websites featured on television.

Retail Finance   Worked in both consumer lending and asset management. Have passed the SII Certificate in Securities & Financial Derivatives. Experience of two in-house exchange & trading systems.

Blockchain   Working on a PoC for a major UK institution, an open source project and involved in many Ethereum groups.

Infrastructure   Everything from database clusters to office networking.

Back Office Integration   Data integration, administrative UIs, screen scraping.

Technologies

- Ethereum Blockchain Stack [web3js, Truffle, Parity, etc]
- Core Java technologies including J2EE, Hibernate and Spring Boot.
- Continuous integration [ex. Git, Subversion, Gradle, Travis CI] and code review tools.
- Excellent Oracle PL/SQL skills (also Oracle database administration)
- Linux server administration and scripted deployments
- Docker, Kubernetes and Amazon Cloud Services
- Basic ES6 and NodeJS

Education

University of Warwick - BSc. Hons. Computer Science, 2004.
Final Year Project in Peer-to-Peer Social Networking Applications.

Experience

Director/Developer/Architect; The Guy Who Used To Work At Ltd — Dec 2016 - present
Employee-owned software development and consulting company. Focus on FinTech and blockchain, particularly Ethereum. Offering services in London and internationally.

Senior Developer/Head of Blockchain; PQ Solutions — June 2017 - Sept 2017
Architecture and delivery of a DLT PoC to a UK entity. Personally authored the smart contracts. Details under NDA. Directly employed at request of end client.

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Hacksociate; Barclays TechStars Accelerator Program — March - June 2015
Assisting teams with advice on development, infrastructure and security in FinTech over the 90 day program. Unofficial blockchain expert. Occasional software development in NodeJS.

Development & Infrastructure, BullionVault; — March 2009 - November 2014
I have worked on all components of BullionVault's software and infrastructure, which currently cares for over $2bn of client assets. First outside technologist recruited. Everything from visual Javascript effects to PL/SQL-based settlement accounting. Introduced BullionVault's European banking facilities and wrote the logic that today handles all of BullionVault's incoming bank payments; as well as planning, purchasing and installing the current data centre. Helped to manage our transition from the founding team to a 5 person technology team organised by Kanban. Left on friendly terms with an accelerated full vesting.

Developer, Zopa UK Ltd; London — March 2006 - Feb 2008
Front-end & back-end development (mainly .Net), web analytics, management reporting, e-commerce support and analysis, office networking, MS SQL Server admin, development env. design and support. Introduced source control and bug tracking to the organisation.

IT Analyst, Morgan Stanley UK; London — Summers of 2003/4
Integrated credit risk reporting system. Prototyped web system for currency settlement processing

Contract Work

Chromaway AB
Overseen the rebuilding of a token staking program. Working on L1 economics and crypto-asset management.

Mattereum Ltd
Acted as a contract CTO for the Mattereum's pandemic-era. Wrote the NFT contracts, and the prototype Mattereum Asset Passport system. Auctioning some of the first phygital NFTs. including musical instruments and land.

Blackswan PLC (Gibraltar)
Technical setup and hand-over of a small bitcoin mining company.

Adzuki UK
1½ years of working with W3C Verifiable Credentials after introducing them to the client for their planned privacy preserving local offers market based on their PSD2 API services.

HSBC Global Markets
Working alongside Hadoop-based Big Data team introducing 12-factor apps and containers for the hosting of their complimentary reporting applications. Primarily Ansible based DevOps.

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Lestari Capital

Consultancy and prototyping towards the use of Ethereum blockchains in carbon markets with support from DIFID.

Instabridge AB

Development of a token driven internal economy on the POA Network chain. Prototyping work, including incorporating smart contract applications into the company's existing CI processes. Mostly standard Ethereum tooling with integration to Android, iOS and Ruby.

Stockholm Green Digital FinTech

Consulting on software development practices in a blockchain context. Technology evaluations and co-ordination with the organisation's current technology partners.

Binkabi (Singapore) Ltd

General software development project management, construction of an on-chain soft commodities exchange, consulting on token models, requirements gathering with partners, and recruitment of an initial Hanoi-based technology team.

PQ Solutions

Built and scaled the PQCheck biometrics signature and evidencing engine in Java, including the necessary cloud and devops work with AWS and Docker. Some business development and PoC work centred on blockchain/DLT technologies.

Safello AB

Simplification and migration of new micro-services platform to a low-maintenance cloud infrastructure. Introduction of an Agile development cycle, continuous integration and advice on operational/regulatory reporting. Further contracts have addressed custodial requirements, and potential future token models.

Prodigy Finance

Carried out an assessment of their outsourced p2p lending software development to-date. Advised on Agile project methods and future technology options.

Zopa UK Ltd

Delivered redundant server on Windows 2003 with .Net & SQL Server 2005.

The Coca Cola Company

Built server-side of the Coke Bubbles video sharing and chat widget. First substantial application of Joost's widget API.

Joost.com

Music recommendation mini-site mapping Joost's music content over last.fm's "likeness graph".

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Academic Work

My dissertation surveyed the area of social networking software, demonstrating that such systems are workable and could be implemented without raising irresolvable privacy concerns. Created a p2p prototype communicating using XMPP.

Non-Profit and Open Source

Large Nginx/PHP Site   Over 1.4 million monthly unique users and over 2.5TB of images served per month with the aid of a CDN. More details on request.

Privacy Angels   A smart contract based privacy solution.

Open Source   I have a small number of open source hobby projects, which can be seen at https://github.com/tbarker .

Interests and Activities

Previous organiser of BarCampBankLondon, now a 60+ person mini-conference on financial technology and innovation. I am currently an Affiliate Member of the IET. I blog occasionally on finance and technology at thomasbarker.com .

Publications

Payments Information in the Real World: Peering through a Broken Text File
Computing & Law Magazine, February 2015

Industry Qualifications

Oracle Certified Professional

Exams of Oracle Database 11g: Administration I, II and Oracle Database SQL Expert.

SII Certificate in Securities and Derivatives   The UK's base-line regulatory exam for Approved Person status.

Sun Certified Enterprise Architect for Java

For architects for designing J2EE applications to be scalable, flexible and secure.