Liam Zebedee E-P.

FULL-STACK ENGINEER · BLOCKCHAIN ENGINEER

Brisbane, Australia

✉ liam@liamz.co | 🏠 liamz.co | liamzebedee | liamzebedee | liamzebedee

Experience

Synthetix   *Remote*

PROTOCOL ENGINEER   *Mar 2021-current*

- Developed and designed secure, tested smart contracts including the etherwrappr, which has processed over $500M of value.
- Developed early instrumentation for Optimism L2 contracts for the Synthetix Futures protocol. Managed deployments and cross-domain co-ordination between Contracts and Frontend.

Ethereum Foundation   *Remote*

FULL-STACK ENGINEER   *Dec 2020-Feb 2021*

- Designed and developed a full-stack prototype of prediction markets for content moderation for Barry Whitehat.

Keep Network   *Remote*

PROTOCOL ENGINEER   *May 2019 - June 2020*

- Protocol design, smart contract engineering and frontend development for tBTC, a trust-minimised hard peg of Bitcoin onto Ethereum.
- Highly technical involvement in cross-chain protocol design and implementation (cryptoeconomics, price feed, proof-of-work consensus proofs, cryptographic schemes). Wrote technical documentation for whitepaper and website.
- Wrote maintainable Solidity smart contracts and tests using Mocha, which are now securing over $8M of cryptocurrency. Rapidly developed POC integrations with DeFi partners like MakerDAO.
- Developed features for React.js frontend and open-source library, tbtc.js.
- Led staff education sessions for an international team in the US/EU.

BlockLab NL   *Rotterdam, The Netherlands*

SR. BLOCKCHAIN/FULL STACK ENGINEER   *August 2018 - December 2018*

- Contracted to BlockLabNL for blockchain/full-stack field project, working in a team of 4 developers.
- Led architectural design and integration of 8 different softwares, including smart contracts, API's, configuration management, and frontend. Led technical direction of monorepo package architecture, smart contract build tooling, test-driven development.
- Wrote compliant relayer for 0x protocol integration. Designed and developed Solidity smart contracts.
- Devised technical solutions in a new space, including integrating 256 bit number logic at the database layer.
- Mentored other colleagues on smart contract development/debugging and blockchain fundamentals.

Vivant Digital   *Sydney, Australia*

JUNIOR UX DESIGNER   *January 2017 - July 2017*

- Vivant was a human-centred digital innovation agency that engaged clients from concept to functional product.
- Assisted in user research studies, interviewing users, collecting data, and visualising insights. Practiced design thinking and lean UX to synthesise problem and solution statements.
- Prototyped user interfaces at various fidelities (sketching, wireframes, mockup) using Sketch, InVision and Marvel.
- Used my technical expertise to rapidly develop proof-of-concept client demos. This included a mobile app (React Native, Twilio API's) and a Slack chatbot.

Cuberider   *Sydney, Australia*

FULL STACK ENGINEER   *July 2016 - December 2016*

- Cuberider was an education startup building software and hardware for cube satellites.
- Built the initial prototype of the learning platform to serve all schools in Australia from scratch. This involved a content management system and editor (TinyMCE), custom editing modules for inserting quizzes (WebComponents), a web IDE (Go, Docker), frontend/backend (React, Django, REST) and deployment (Azure).
- Worked under CEO and with another junior developer.

Veredictum   *Sydney, Australia*

CO-FOUNDER, BLOCKCHAIN/FULL STACK ENGINEER   *December 2015 - July 2016*

- Veredictum was a startup that solving piracy by watermarking content and registering the ownership to the blockchain. Their first product was a film script registration service which used the Bitcoin blockchain.
- Developed first non-financial use of the Bitcoin blockchain in Australia, a notarisation microservice using Node.js that recorded custom data to the Bitcoin blockchain.
- Developed prototypes of user experience for fingerprinting images using an app (Ionic, Meteor) and a video fingerprinting algorithm (C, FFM-PEG). Built the film script registration web application using Meteor.js.

WiseTech Global   *Sydney, Australia*

ASSOCIATE SOFTWARE ENGINEER   *May 2015 - Dec 2015*

- Went through a 12 week bootcamp which teaches agile processes, coding conventions, unit testing, defensive programming, code contract-based programming.
- Investigated, debugged and fixed issues with the core CargoWise One platform (.NET, C#, JS), including unit tests and documentation.

Extracurricular

2019	**I'm a cyborg now! (On Building My Own Artificial Pancreas) (blog post)**, Hit HN frontpage	*Amsterdam*
2019	**Hackathon prize winner - "ciadao" decentralised social platform**, ETH Berlin Zwei	*Berlin*
2019	**Scaling through cross chain communication (talk)**, Vierde Vrijdag	*The Hague*
2018	**The Blockchain Tiramisu: deep dive into blockchain engineering practices (talk)**, Vierde Vrijdag	*The Hague*
2018	**Merkle Trees and JS Bundles (talk)**, tbd hackathon	*Amsterdam*
2018	**Winner of ParkMobile Hackatrain ticket**, Hackatrain hackathon	*Amsterdam*
2017-2020	**Volunteer**, SAP - Young ICT Explorers	*Sydney*
2015	**Metric: Building a quantitative self app in Meteor and React (blog post)**, Hit HN frontpage	*Sydney*

Projects and open-source

Indepedent

WRITING AND RESEARCH *2018-present*

- Built a discrete time step simulator of T1 diabetic metabolism.
- Lisp interpreter in JS.
- Research into visualising codebases using PageRank applied to AST's (d3.js, Go), computing web bundle deltas using merkle trees on AST's.
- Authored ZBTC: Zero-trust wrapped Bitcoin on Ethereum, which later grew into my collaboration with tBTC.

Open-source

DEVELOPER AND CONTRIBUTOR *2010-present*

- Published open-source software used by others:
  - Metric (50+ ★)
  - jekyll-i18n (2.5k+ ⬇)
  - TiledMapPlus - integrated into Slick2D game engine when I was 15.
- 10,000k+ reputation on StackOverflow

Skills

Frontend	Functional ES6 JavaScript and TypeScript, React, Redux, Mocha, Next.js, Sass, CSS3, styled components, Electron, Puppeteer
Backend	Node.js, Go, C#, Python, Django + REST Framework, Meteor, Nginx (load-balancing), SQL, WordPress CMS
Blockchain, P2P	Ethereum, Optimism L2, Solidity, ethers.js / web3.js, Truffle framework, cryptoeconomics, EVM internals, Bitcoin/POW smart contract testing, patterns (oracles, token standards, proxies)
Software engineering	Git, Docker, Bash, test-driven development, monorepos Cloud deployment (Azure, AWS), Unix administration Networking, browser bots/automation, image processing / conv. neural nets (Numpy, Keras), compilers/AST's
UX	Prototyping at varying fidelities (sketching, wireframes, mockup) using Sketch, InVision, Marvel user testing and interviewing, design thinking process
Languages	English (Native), French (B1 - Fluent), Dutch (A1)

Education

University of Technology Sydney *Sydney*

B.IT. IN COMPUTER SCIENCE AND INFORMATION SYSTEMS *Jan. 2014 - Dec. 2017*

- Selective co-operative scholarship program in partnership with industry sponsors. Graduated with Distinction average.

Queensland Academy of Science, Mathematics and Technology *Brisbane*

INTERNATIONAL BACCALAUREATE *Jan. 2012 - Dec. 2014*

- IB 38. Studied English, Mathematics, French B2, Business, Psychology, Computer Science.

References

Available upon request.