Seb Insua *Engineering Lead & Software Engineer*

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Summary

Product engineer, open-source contributor and autodidact with expertise in Node.js and React (12 and 9 years respectively).

Technical specialties: 12 factor back-ends; high-performance UIs; strongly-typed data; TypeScript, Python and SQL.

Experience

Freelancer, Consultant & Contractor

Private Study *Apr '23 –*
- Articles exploring algorithms, linear algebra, and an implementation of a neural network in Rust.

Software Engineer at T. Rowe Price *Oct '20 – Mar '23*
- Developed Playwright-based synthetic monitoring service to continuously run E2E tests against different environments and log and expose structured reports, screenshots, traces and videos.
- Rewrote a legacy React application into TypeScript while replacing the use of Redux as a cache layer, doubling the Lighthouse score from 50 to 98, and significantly improving the testability of grids and tables.
- Improved reliability of Python, Node and Kotlin services for data ingestion into S3/PostgreSQL and calculations.

Software Architect at JPMorgan Chase & Co. *Aug '19 – Oct '20*
- Re-hired into a newly formed Core UI Infrastructure team to provide tooling for high-scale development. Developed caching infrastructure for CI. Demonstrated Argo workflows that could run hours of tests in a few minutes.
- Worked on monorepos, codemods, visual regressions and automations to help with large, complex upgrades.

Technical Lead at Shell *Dec '18 – Jun '19*
- Brought-in by an ex-colleague to take the reigns on and bring in-house an under-performing data project. Hired a team of data scientists and data engineers and left a strong foundation for the future by creating a highly collaborative work environment that included weekly discussions and training workshops.
- As a team, we identified areas in the earlier consultancies work that needed improvement and established better practices around quality and communication, while also prioritising the rapid build of a data platform using Azure, Docker, Helm, Jupyter, Kubernetes, Python and Spark, that improved end-to-end pipeline performance by 4x.

Application Engineer at JPMorgan Chase & Co. *Jun '17 – Dec '18*
- Enabled the successful rewrite of a high-performance single-dealer platform trading UI in React and TypeScript.
- There was a hard deadline as the original application was written in Flash which was end-of-life. The application was complex but modular so I setup monorepo tooling and an RFC process so that several teams could work independently yet benefit from code re-use, gradually composing the application from over 200 packages.

Consultant at YLD *Jan '17 – Apr '17*
- Improved the logging and error handling of a shared framework by adding distributed tracing and error causes.
- Implemented 4 Node.js microservices while also supporting the team via the development of shared helpers to mock data during test execution and with documentation on how to migrate an SQLite database to MySQL.

External Advisor at McKinsey & Company *Apr '16 – Dec '16*
- Advised enterprise clients on software architecture, and conducted code reviews and training for their teams.
- Developed software to optimize energy and material usage within factories. This involved implementing algorithms for calculating costs and analyzing flows of energy, product, and waste through the system.

Earlier Client Work *Apr '13 – Apr '16*
- Technology leadership and rebuild of a legacy passport system into Node.js services at the Home Office.
- Development of a real-time animated map of driver locations for Hailo, an open-source analytics middleware for the Sequoia-backed startup Keen.IO, and a React website and component library for the Economist.

We R Interactive

Lead Game Developer *Oct '12 – Apr '13*
- Delivered MVP of an innovative second-screen social game utilizing Node.JS, WebSockets and Cassandra.

Saffron Digital

Lead Developer *Oct '10 – Oct '12*
- First back-end engineer on the HTC Watch project, leading development until HTC's acquisition for $48m.
- Developed expertise in DRM, parallel video encoding, and payment services using Python and MySQL on AWS.
- Developed an application for a Samsung Connected TV device with challenging hardware limitations.

Education

Coursera

Machine Learning *Feb '16*
Course Certificate, License E3XLGER56CQ3

University of Kent

Bachelor's degree in Computer Science *2005 – 2009*