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- Based in Sydney, Australia

Software developer with 14+ years experience in full stack web, desktop, and mobile application development.

Languages: TypeScript, JavaScript, Python, Go, C#, C++.

Skills: Web + ecosystem, React, Node.js + ecosystem, full stack, Unity.

Employment

Neara • Senior Software Engineer • 2023

Dart, Python, TypeScript, React.

Neara is a platform that “creates 3D network-wide models that reflect and simulate how utility assets behave in their real-world environment”. Currently I am working on the Dart frontend.

- Designed and built Neara’s internationalisation platform from the ground up, with Dart/TypeScript/Python libraries and tools to extract content for localisation and integrate with a localisation service. Before this, Neara had effectively no localised content nor i18n support.
- Designed and built integration of TypeScript + React into Neara’s Dart application.
- Bootstrapped and supervised the engineering side of a greenfield product.

Salesforce • Software Engineering Architect (Quip) • 2018-2022

TypeScript, JavaScript, Python, Web, React, Node.js, AWS, iOS, Windows.

Quip is a real-time collaborative document, spreadsheet, and chat application for web, desktop, and mobile. It was structured as a largely independent company within Salesforce until Salesforce acquired Slack in 2021, when it became part of Slack.

- Responsible for managing and often implementing Quip’s client toolchain: node, TypeScript, JavaScript, React, Storybook, WebDriver, rollup, jest, babel, prettier, eslint, vite, and Python. Roughly 50% of Quip engineers use this for their daily workflow.
- General expert on web client code quality and health, primarily in TypeScript, React, and related tooling. Provided general engineering advice, code review, and core library maintenance.
- Technical lead for Quip’s slides product. I was responsible for frontend feature development in TypeScript and React with some Python, interfacing with the product and design team, triaging and prioritising external client issues, and reviewing design and code of other team members.
- Developed and reviewed many miscellaneous features across Quip’s core document product, primarily in TypeScript, React, and full stack integration with Quip’s Python server backend.
- Occasionally seen deploying and maintaining Quip’s Windows application.

Attic Labs • Software Engineer • 2015-2018

Go, JavaScript, Flow, React Native, Web, iOS.

Attic Labs was an 8-person startup that developed Noms, a novel open source database. It was acquired by Salesforce in 2018.

- Implemented core features of Noms’ Go implementation, including the sophisticated “Probabilistic B-Tree” technology. My work here is open source and can be seen on GitHub.
- Co-inventor of patent US11030187B1 based on this work.
- Core developer of the open source JavaScript and Flow implementation.
- Implemented several tools written in Go that demonstrate and manipulate a Noms database.
- Core developer of a web and iOS photo sharing app built on top of the Noms database. I wrote a significant portion of the stack using Javascript, Flow, React Native, GraphQL, and Go. Attic Labs was acquired before it launched.

Google • Staff Software Engineer • 2009-2015

C++, JavaScript, Chrome Extensions, Python, Java.

At Google I spent 5 years working on Google Chrome, the desktop web browser used by billions of people. Most of these were developing the Chrome Extensions platform – installable applications most visible as large buttons on Chrome’s toolbar, where I was a Staff Software Engineer and technical lead for 2013-2015.

Education As a technical lead, I set priorities and technical leadership for the team, with a focus on security and speed. May 15, 2024

My approval was required for all new APIs developed for the Chrome Extensions platform.

- Responsible for general maintenance and improvement of the platform itself.
- Interacted with the open source community that is built around Chrome Extensions. These were hobbyist developers though to developers from large companies (including Google), and everybody inbetween.
- Provided design and code review for many APIs across different teams in the Google Chrome organisation and elsewhere inside Google.
- Designed, implemented, and documented several fundamental APIs – for example chrome.storage and activeTab.
- I am co-inventor of patent US9535755B2 based on the synchronisation feature of the chrome.storage API.

My first year (2009) at Google was on Google Wave, the short-lived email competitor. I worked on features in the web frontend (Java / Google Web Toolkit) and backend (Java).

NICTA • ERTOS Research Associate • 2009

C, Python.

NICTA was Australia's IT research centre, later renamed Data61 and merged with CSIRO. I worked with the Operation Systems group, called ERTOS. I built productivity tools, contributed to a version of the Linux Kernel being developed by ERTOS, and contributed to the seL4 project.

Education

BSc Computer Science (Honours) • UNSW • 2005-2009

- Graduated with 1st class honours.
- My honours project was with the programming language research group of UNSW, on molecular simulations running on graphics cards.

Other

- Solo developer and publisher of Jumpling, an iOS jump-themed game developed in Unity. Current high score: 2,405.
- Participated in 9 game jams both solo and in teams of 2-3 people, all in Unity. For example, my Ludum Dare submissions are [here](#), [here](#), [here](#), [here](#), [here](#), and [here](#). I also built [this](#).