

# Ashwanth Fernando

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## Work Rights

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**Australia:** Australian Citizen

## Skills

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**Languages:** Java (Primary) → GoLang → Scala → NodeJS → Python → Kotlin

**Databases** MySQL | PostgreSQL | DynamoDB

**CLOUD:** AWS EC2 | ElastiCache | SNS | SQS | PubSub | RDS | Dataform | Terraform | Jenkins

**MISCELLANEOUS:** Spring | Protobuf | GoMock | Gorm | JPA | Redis | Zookeeper | Kafka | protobuf | GraphQL | grpc | Temporal

**MANAGEMENT:** Deep focus on efficient execution | Relentless pursuit of pragmatic excellence | Building relationships within and across teams to broaden impact

## Experience

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**Principal Consultant**, Atlassian, WEX, Coles and Macquarie Bank

Feb 2022 - Present

- Served as a high end product engineer, driving technical roadmaps, architectural reviews, and production readiness across multiple client engagements.
- **Macquarie Bank:** Optimized Wealth Adviser platform by GC tuning, optimising completable futures, thread pool optimization, and performance enhancements across multiple microservices, resulting in a 7% cloud cost saving for the division.
- **Coles:** Contributed heavily to a reactive Back-End-For-Front (BFF) layer built partly with Kotlin to efficiently handle high-volume transactions for Coles.com.au. Delivered core services (Continuity, Shoppable Recipes, Trolley upgrades) that supported revenue uplift of close to 15% of online channels.
- **WEX:** Led backend modernization efforts for billing and reporting services, reducing billing inconsistencies by 14% and significantly improving speed and reliability of monthly statements.
- **Atlassian:** Architected a consistent-hashing load balancer for active-active Elasticsearch clusters, boosting Confluence search availability by 7% globally. Built insta-deploy to all regions from main which was a significant improvement to dev productivity.

**Software Engineer**, Packsmith

Jul 2024 – Nov 2024

- Drove the end-to-end technical strategy for a distributed reverse logistics platform, collaborating closely with PMs on architectural decisions, design standards, and code quality.
- Built a priority/vip tagging system for Shopify feeds, improving shipping times for priority orders by 140%.
- Streamlined workflows in Temporal to optimize shipment flow, ensuring accurate stage progression and significantly reducing operational overhead.

**Engineering Manager | Staff Engineer**, Canva, Sydney, Australia

Nov 2018 - Jan 2022

- Transitioned from an early-stage individual contributor to leading a team of six engineers, guiding the development of back-end infrastructure for five innovative products—Canva Live, Playlist, Talking Presentations, Reactions, and Presentation Remote Control.
- Balanced product ownership, people management, project oversight, and hands-on coding (20% capacity), ensuring both team effectiveness and technical excellence.
- Authored three patents based on original work in live interaction features and large-scale presentation technology.
- Published technical blogs on Canva's engineering platform and delivered internal talks on auto-correct systems.
- Scaled Canva's search infrastructure from 20M to 80M users, performed a complete rewrite of search infra across all the layers queuing, caching, indexing, serving to support long term scale.

**Senior Staff Engineer**, eBay, San Jose, California

Nov 2014 - Aug 2018

- Headed the design of a dynamic configuration system and page assembler for search result templates, enabling business teams to adapt search UI/UX without direct engineering involvement, cutting weeks off typical release cycles.
- Built dialog system SDK to quickly ship multi-turn dialogs that include carousels, text, videos, images, questions to production. Has integrations for Facebook and Google Assistant. This dialog system can ship new complex conversations in a matter of minutes and increased Shopbot sales by more than 10x.
- Created an open-source regression-testing framework (Regressr), adopted across multiple departments for real-time performance comparisons between service versions.
- Led multiple project teams of six or more engineers, setting technical vision, coordinating development roadmaps, and facilitating inter-team collaboration.

**Principal Engineer (ICT 5)**, Apple, Cupertino, California

Sep 2013 - Oct 2014

- Principal Engineer for a globally distributed load balancer with 99.999% availability across several API services.
- Oversaw a team of 12 engineers, managing project timelines, code quality, and architectural decisions. Regularly facilitated consensus-building on design proposals and led strategic engineering initiatives.
- Operationalised infrastructure for device activations across US, Canada and Europe.

**Staff Software Engineer**, Walmart, San Bruno, California

Oct 2010 - Sep 2013

- Served as architect and technical lead for Walmart Canada's SEO platform and base-variant management system, reducing bounce rates by 30%.
- Integrated product reviews into the website with BazaarVoice.
- Drove cloud infrastructure modernization efforts across a large-scale fleet, invented two patents and decreased deployment cycles significantly.
- Instituted an enterprise-wide configuration management framework, unifying deployment practices for over 200 microservices.

**Consulting Engineer**, BestBuy, Walgreens, Pearson VUE

Aug 2005 - Sep 2010

- Coding for web-scale backends, focusing on reliability, resilience, and high-traffic optimizations.
- Led implementation of JSP-based backend services and front-end templates for retail and testing clients.
- Developed offline batch processes for advanced fraud detection, enabling proactive identification of high-risk

transactions.

## Certifications

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- Sun Certified Java Programmer
- Sun Certified Web Components Developer
- Sun Certified Business Components Developer
- IBM Certified Solution Developer in XML 1.1. and Related Technologies
- IBM Certified Solution Designer - Object Oriented Analysis and Design

## Patents

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- Systems and methods for remotely controlling electronic presentations (2021221388, Issued Mar 9, 2023)
- Systems and methods for storing and replaying presentations with video and audio (US 20230205808, Filed May 26, 2021)
- Systems and methods for interactive presentations (US 20230205552, Filed Jun 26, 2021)
- System and method for increasing throughput of a PaaS system (US 9342369 B2, Issued May 17, 2016)
- Verification of complex multi-application and multi-node deployments (US 20140109082, Issued Apr 17, 2014)

## Current Areas of Interest and Exploration

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Generative AI, Cloud, Mathematics for Machine Learning, Large scale architectures.