Ashwanth Fernando

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Summary

Software Engineer with 15+ years scaling high-performance systems and teams at Apple, eBay, Canva, and Atlassian. Expert in distributed architectures, team leadership, and driving technical excellence across multi-million user platforms.

Work Rights

Australia: Australian Citizen

Technical Skills

Primary Languages: Java, Go, Python, Kotlin, Scala, Node.js
Cloud Infrastructure: AWS (EC2, RDS, DynamoDB, SNS/SQS, Elasticache), GCP (BigQuery, Dataform, PubSub), Terraform, Kafka, Redis, Zookeeper, Elasticsearch
Frameworks Tools: Spring, GraphQL, gRPC, Temporal, Protobuf
AI: LLMs, RAG, Langgraph, Agentic workflows, Prefect
MANAGEMENT: Deep focus on efficient execution | Relentless pursuit of pragmatic excellence | Building relationships within and across teams to broaden impact

Experience

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

- 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 & Intellectual Property

- **Systems and methods for interactive presentations** - US 20230205552
- **Systems and methods for storing and replaying presentations w/ video and audio** - US 20230205808
- **Systems and methods for remotely controlling electronic presentations** - US20230076902A1
- **System and method for increasing throughput of a PaaS system** - US 9342369 B2
- **Verification of complex multi-application and multi-node deployments** - US 20140109082

Current Areas of Interest and Exploration

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

Location

Available for roles in New York City and surrounding areas. Open to remote/hybrid arrangements.

Technical Focus Areas

AI/ML Infrastructure, Distributed Systems, Platform Engineering, Cloud-Native Architectures, Engineering Excellence