Jared Tucker

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EXPERIENCE

Software Engineer Jan 2024 – Present

Leidos Australia *Melbourne, VIC*

- Contributed core technical design and implementation for migration of monolithic application to microservice architecture, architecting communication patterns using Kafka event streaming and designing service boundaries that improved system resilience and reduced deployment risk across a 12-engineer team.
- Architected and developed 5+ production microservices in Kotlin/Spring Boot with MongoDB, implementing asynchronous event processing and further optimized schema designs that reduced database load by 40% and improved API response times from ~350ms to ~200ms for key endpoints
- Designed and implemented real-time notification, communication and unread indicator systems embedded across the entire application suite, leveraging Kafka event streams and WebSocket connections to deliver sub-second updates across siloed user environments and international deployments with 99.9% message delivery reliability
- Established authentication and authorization infrastructure using Keycloak, architecting integration patterns for multiple integrated microservices, utilising the combination of Kafka and Keycloak event management that enabled isolated microservices real time user, organisation and team data query capabilities while maintaining centralized identity management and role-based access control.
- Led the end-to-end design, implementation, and deployment of a Turborepo-based monorepo consolidating shared Ember components, utilities, and design system packages into a unified internal registry. Implemented hot-reload showcase tooling, custom versioning, and fully automated GitLab CI/CD, eliminating 11 build pipelines while improving design consistency and significantly accelerating development velocity across a growing application suite.

EDUCATION

Monash University Clayton, VIC

Bachelor's Degree of Computer Science *Feb. 2021 – November 2023*

PROJECTS

Riven | *ReactJs/NextJs, Kotlin, Springboot, PostgreSQL, Temoporal* Github

- Building a feature-complete CRM platform with fully customizable, drag-and-drop layouts supporting diverse business automations with the development of a custom workflow execution engine, currently in final MVP phase approaching market launch
- Engineered dynamic layout system extending Gridstack.js library with custom React components, enabling real-time collaborative editing and persistent configuration management and real time dimension awareness capabilities with automatic resizing based on dynamic content.

Paladin | *Kotlin, Kafka, RabbitMQ, Amazon SQS, PostgreSQL* Github

- Built a dynamic message routing system to fan consumed events from a central Kafka topic out to a dynamically configured range of external message brokers
- Built internal message decryption/encryption services with support for supplied schema registry to support cross broker messaging (ie. Kafka to RabbitMQ to SQS, etc)

Flextask - Unihack 2023 | *ReactJS, FastAPI, OpenAI , MongoDB* Github | Devpost

- Utilized OpenAI's natural language processing capabilities to analyse and understand the input description of project
- Leveraged Machine learning algorithms to generate relevant subtasks based on the input description to help increase user productivity and workload management capabilities.

TECHNICAL SKILLS

Languages: Kotlin, TypeScript, JavaScript, Java, Python, SQL, C#
Backend/Architecture: Spring Boot, Microservices Architecture, Event-Driven Design, Kafka, RESTful APIs, GraphQL/Wundergraph, MongoDB, PostgreSQL
Frontend/State Management: React, Next.js, TypeScript, Angular, Server-Side Rendering, Zustand
Infrastructure/DevOps: Turborepo, Docker, Kubernetes, Keycloak, Git, Bash, Monorepo architecture management