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SENIOR SOFTWARE ENGINEER

Versatile software developer with expertise in full-stack development and team lead with over 11 years of industrial experience designing and delivering complex software solutions across the full software development life cycle. Proven track record in researching, adopting, and integrating modern technologies to drive performance, security, high availability and scalability.

Areas of Expertise

Full-stack development . Product Optimization & Security .
Development Process Optimization & Security

Technical Skills

Programming Languages: Rust, Go, Typescript, Dart
Cloud Platforms: Google Cloud Platform (GCP)
Web Services & APIs: gRPC, REST, WebSocket
Server Proxy: Envoy, Nginx or self developed-solution
Databases: PostgreSQL, Redis
DevOps & Infrastructure tools: Terraform, Kubernetes, Docker
Development tools: Neovim, Git, VSCode

PROFESSIONAL EXPERIENCE

MATRIX PRECISE, Los Altos, USA . 2020 - 2025
Startup company providing **communities services** that strengthen daily safety and privacy

Team Lead and Full-stack Developer
Worked directly under the CEO. Led a small full-stack development team and conducted extensive R&D to build a highly secure and reliable system.

Tasks Performed:
- Identified and analyzed development challenges, providing strategic solutions to the CEO and development team across frontend, backend, develops and infrastructure domain.
- Manage team development process by conducting through code reviews and merging team members pull requests, enforcing code standards. Also authored a wide range of technical document and design a development framework and bug tracking (Jira) for the team.
- Developed offline-first, secure mobile apps and admin dashboard web apps with strong attention to UI/UX. Also implemented nearby device communications and real-time

communication (Firestore).
- Designed relational data structures aligned with business requirements, optimized SQL database queries for performance. Also implemented in-memory caching (Redis) to accelerate data retrieval, reduce load on primary RDBMS.
- Engineer high-concurrency, secured, reliable backends system capable of handling large volumes of async I/O tasks, especially when it comes to communication with 3rd-party API. Ensured system high availability and scalability with the optimal cloud solutions.
- Processed user-uploaded files by optimizing file size and generating file thumbnails for videos and photos (FFMPEG & ImageMagick).
- Built and maintained CI/CD pipelines for building and deploying all frontends, backend services, databases across both development and production environments.

Achievements:
- Implement Common Table Expressions (CTEs) within AlloyDB, eliminating the need for recursive in backend and other inefficient techniques, resulting in significant **improved query performance by 50%** and cost savings
- Migrated a **1TB amount of data** from Spanner to AlloyDB (PostgreSQL) and updated the query syntax in hundreds of services in one week with reliable results.
- Implemented backend concurrency capable of handling more than **6400 of simultaneous mass communication requests** in per each light weight Cloud Run instance - 1vCPU & 128MB RAM
- Leveraging efficient code generation techniques in Dart and Go to minimized repeated code and improve maintainability, resulting in up to **10x faster delivery** for multiple features.
- Replaced Envoy proxy side car with a custom implementation for gRPC and gRPC-web handling, reducing the **binary size by 100x** and eliminating garbage collection for lower latency and better performance

***Technologies Used:** (Rustlang, Golang, NodeJs, Flutter), (Terraform, Helm), (Sentry, Google Analytics), (Redis, AlloyDB, Spanner, Firestore, Firebase Remote Config, ElasticSearch), (Cloud Run, Cloud Functions), (Google Cloud Load Balance, Backend Service, Virtual Private Cloud), (Github Action, Fastlane, Firebase App Distribution, Firebase Hosting), (FFMPEG, Image Magick), GitHub, Figma, Firebase Authentication*

WAKUMO . 2017 - 2020
Startup company providing **crypto currencies services**

Application Developer and 1/2 Scrum Master
Led the front-end development team and took some scrum master responsibilities

Tasks Performed:
- Developed off-line first iOS and Android applications with rich features including in-app notifications, authentication, multilingual support. Implemented observability including error monitoring, and analytics.
- Implemented CI/CD pipelines for automated builds and deployment for the mobile team
- Wrote unit tests and end-to-end (E2E) tests.
- Organized and facilitated scrum meetings.

Achievements:
- Implemented code generation to improve **feature delivery speed up to 5x.**
- Secured **100% high-risk transactions** by implementing multi-factor authentication with password, PIN, and biometric.
- **Eliminated thousands of hours of manual build and deployment** work per year by implementing optimized CI/CD pipelines for the team.
- Remove dependency on intenet connection, allowing users to **access core functionality offline**.

Technologies Used: (NodeJs, Flutter, React Native), (FastLane, CircleCI, AppCenter), (Sentry, Google Analytics), (OneSignal, AWS SNS), Auth0, GitHub, Figma

YLINKEE . 2015 - 2017
Startup company providing online **entertainment services**

Full-stack Developer
Develop and deploy end to end full stack web apps

Tasks Performed:
- Built and deployed completed web applications from start to finish - covering frontend, backend, database development and server configuration (MERN or MEAN stack + CentosOS + Nginx).
- Implemented multiple-strategy authentication (Passport.js).
- Documented API calls (RAML).

Achievements:
- Reduce **web apps bundle size up to 60%** with code splitting and tree shaking.
- Decrease **subsequent frontend requests time by 70%** by isolating 3rd party vendor into a separated cached bundle.
- Reduce user **wait time for viewing high-resolution photos by 80%** with progressive image loading.
- Optimized uploaded **images size up to 60%** without sacrificing quality, improving loading time.
- Enabled **Googlebot to crawl and index web app** more efficiently by applied server-side render technique and optimizing keyword usage.

Technologies Used: (NodeJs, React, AngularJS, Angular), ExpressJs, MongoDB, Image Magick, CentOS, Nginx, GitHub

ACADEMIC PROJECTS

Image Recognition (2020): Test the accuracy of transfer learning from pre-trained models: VGG16, VGG19, MobileNet, DENSE121.

Technologies Used: Flask, Docker, NextJs

Vegetation Management System, DUE (2016): Developed an interactive website to manage the vegetation distribution throughout Da Nang City with WebGIS and PostGIS

Technologies Used: Spring (MVC, Security), JPA, Bootstrap, OpenLayers, PostgreSQL (PostGIS) and WebGIS

PERSONAL PROJECTS

Griffin (2024): Extremely lightweight and high-performance proxy written in Rust as an alternative to Envoy Proxy for handling gRPC web

Github repo: https://github.com/exajoy/griffin

Technologies Used: Rustlang

Personal Blog (2020): Designed and developed a blog to share experiences and opinions on programming technologies.

Technologies Used: Markdown, NuxtJS, Docker, Kubernetes, Figma

EDUCATION

Master of Science in Computer Science *(2020-2021)*
Maharishi International University – Iowa, U.S.A

Key Courses: Big Data Analysis, Big Data Technologies, Machine Learning Design Pattern

Bachelor of Science in Information Technology Education *(2012-2016)*
Da Nang University of Education – Da Nang, Vietnam

PROFESSIONAL DEVELOPMENT

- Mentor, GDG DevFest Hackathon (2018, 2019, 2020)
- Scrum Master Certificate (2018)
- Aptech International Certified Computer Professional Certificate (2016)

HONOR & AWARDS

- First Award for Da Nang GDG DevFest Hackathon (2018)
- First Award for Student Research Conference (DUE 2016)
- First Award for IBM BLUEMIX - HACKATHON (2015)