ALONSO ALPHONSOVICH KOUMBA R.

Stanford grad and ex-Googler

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Passionate and experienced software engineer with over a decade of crafting impactful solutions across full-stack, backend, and frontend development. My journey spans diverse industries, including fintech, healthtech, search and recommendation systems, people operations, social gaming, and marketplaces, where I've embraced challenges to create innovative systems that make a difference.

- Extensive hands-on experience with a diverse range of web technologies, particularly modern JavaScript frameworks, and proficiency in programming languages across multiple paradigms: ***Procedural :*** *Java, Javascript, Python, C, C++, C#, Bash, ZSH, Assembly;* ***Declarative:*** *SQL, HTML, CSS;* ***Functional:*** *Scala, Lisp, Haskell, Erlang.*

Experience

Senior Software Engineer — Narmi Inc.

2023 - 2024, New York City, NY

- Led the design and implementation of a credit card processor API integration, enabling seamless connectivity with payment networks.
- Developed robust banking core system integrations to support secure, and compliant financial operations.
- Engineered reusable frameworks and libraries to streamline the implementation of financial features.
- Partnered with product managers and stakeholders to define technical requirements and deliver features that increased customer satisfaction.
- Conducted comprehensive code reviews, fostering best practices in clean code and system design.

- *Stack: Python, Django, SQL, PostgreSQL, Bash, ZSH, Git.*

Senior Software Engineer — Gentem Inc.

2020 - 2023, San Francisco, CA

- Led the architecture and implementation of a real-time health insurance eligibility platform, enabling instant verification of patient insurance details, reducing eligibility check times by 90+%, and significantly improving patient intake efficiency across medical practices.
- Designed and deployed a financial reporting platform that delivered actionable insights into medical practices' financial performance through real-time dashboards and detailed analytics, enhancing decision-making capabilities.
- Boosted system reliability and performance by introducing real-time monitoring and alerting, implementing caching mechanisms, and optimizing database queries, resulting in reduction in API response times.
- Established CI/CD pipelines to automate deployments, reducing release cycle times and improving the reliability of updates.
- Collaborated closely with cross-functional teams, including product managers and stakeholders, to define technical requirements and deliver high-impact features aligned with business goals.
- Improved codebase health and maintainability by introducing industry-standard best practices and performing comprehensive refactoring.
- Engineered reusable frameworks and libraries, accelerating development timelines, while ensuring high code quality and maintainability.
- Mentored junior developers, enhancing team productivity and technical expertise.
- Conducted thorough code reviews, promoting best practices in clean code, scalable architecture, and robust system design.

- *Stack: Python, Java, Javascript, Django, React, jQuery, SQL, PostgreSQL, ZSH, Git.*

Founder — LiftMania

2017 - 2020, San Francisco, CA

- Designed and built a comprehensive mobile fitness platform using Dart and Flutter, delivering real-time tracking, progress analytics, and a seamless user experience across Android and iOS devices.
- Developed versatile ZSH/Bash libraries to streamline command-line workflows and improve developer productivity.
- Engineered a Lisp-like search query language engine in Java, enabling flexible, expressive search capabilities for complex datasets.
- Created a stored-procedure-based ORM using Java and SQL, optimizing database interactions and simplifying query management for high-performance applications.

- *Stack: Python, Java, Javascript, React, jQuery, Play Framework, gRPC, Protobuf, Dagger, Annotation processors, Dart, Flutter, Vue.js, SQL, PostgreSQL, Bazel, ZSH, Git, and Linux.*

Software Engineer — Google Inc.

2010 - 2017, Mountain View, San Francisco, CA

- Search & Query Frameworks:
  - Built structured queries frameworks, enabling advanced search features like contextual synonyms, plural inflections, title detection, and boolean operators.
  - Developed a contextual synonyms framework, introducing declarative synonym expansion rules for enhanced query precision.
  - Created expression interpreters, simplifying search boosting formula management and debugging.
  - Contributed to a team awarded a patent for developing an innovative approach to de-duplicate job postings, enhancing the accuracy and efficiency of job search and recommendation systems.
- Productivity Tools & Infrastructure:
  - Designed build tools, centralizing build, test, and deployment workflows, significantly boosting team efficiency.
  - Created a YAML-based deployment configuration framework, simplifying App Engine server management and reducing deployment complexity.
  - Developed build extensions to minimize errors and streamline server creations.
- Applications & Features:
  - Architected a reusable system for generating verification letters, improving ease of use and adaptability for various document types.
  - Designed a flexible data aggregation system in Python, SQL, and Bash, processing survey data and generating extensible reports for surveys.
  - Built a self-service tool for automating participation rate tracking, supporting advanced features like anonymous submissions and hierarchical views.
  - Developed an organizational chart viewer with drag-and-drop functionality and analytics, achieving 50,000+ monthly page views internally and saving significant legal costs.
- Optimization & Scaling:
  - Reduced Google App Engine app size by 50% by optimizing build dependencies.

    - Designed caching and optimization strategies to improve query execution and resource utilization.
- Leadership & Collaboration:
    - Mentored team members on best practices, acted as the go-to expert for query, build, and deployment tools, and conducted code reviews.
    - Spearheaded tools and frameworks that enhanced productivity and feature delivery for complex systems like search queries and job deduplication.
    - Contributed 500,000+ total line changes, and maintained high code quality and reliability.
    - Partnered with product teams and stakeholders to translate business needs into technical requirements and drive feature development.

- *Stack: Java, Python, Javascript, gRPC, Protobuf, SQL, Bazel, Lisp, Bash, ZSH.*

Software Engineer — DotBlu Inc.

> Employee #1
> 2008 - 2010, San Francisco, CA
> Social Gaming Network with over 10 million users.

- Developed full-stack web applications, including social networks and gaming platforms, handling end-to-end processes: architecture, development, scaling, maintenance, and monitoring.
- Integrated real-time TSN Sports Network data feeds, automating content creation for game schedules, scores, and news.
- Designed and launched a Twitter-like social network for sports betting using virtual currency.
- Created a virtual currency-based photo trading game.
- Built a custom search engine using Solr, with an intuitive UI for content discovery.
- Developed advanced UI features (menus, alert feeds, photo browsers) using CSS and JavaScript frameworks YUI, MooTools, and JQuery.
- Boosted performance with caching mechanisms, and optimized database queries.
- Built Facebook-integrated applications, extending user engagement.
- Administered infrastructure, including Subversion, Trac, and Ubuntu-based servers.

- *Stack: Javascript, Python, C#, SQL, Bash, .NET, Lucene, Solr.*

Sole Developer — Stanford University, CS Project

> Stanford University, Stanford, CA
> A social network for personal growth.

- While a junior student, awarded a Technical Achievement Award at the Stanford Computer Science Senior Project Software Fair.
- Developed a social networking website in 2 months, with *Javascript, HTML/CSS, Python, Ajax, Dojo, script.aculo.us, lighttpd, and MySQL.*

Summer Research Project (CURIS) — Stanford University

> Stanford University, Stanford, CA
> Computer Science Department, Professor David Cheriton.
> KIWI Project: building self-managed wireless LANs.

- Developed a web-based map application to manage a wireless network monitoring system.
- *Stack: Javascript, Ajax, HTML/CSS, XML, PHP, MySQL, and Apache server.*

Education

- **Stanford University, *Stanford, CA***
  B.S. in Computer Science
- Lycée National Léon Mba, *Libreville, Gabon*
  Ranked #1 nationally in Gabon, achieving the highest honors—**Mention Très Bien**—
  in the *Scientific Series BAC (Math, Physics, & Chemistry)* 🔗 Wikipedia link here

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Fun Tidbits

- Accidentally read *JavaScript: The Definitive Guide (6th Edition)*, 1,093 pages, cover to cover (multiple times, oops!), resulting in a deep understanding of JavaScript.
- While in high school in Gabon, I tutored and mentored my peers in mathematics, physics, and chemistry, helping them enhance their understanding and academic performance in these subjects.
- As a native French speaker and polyglot, I have a diverse linguistic background that includes working knowledge of Russian and some familiarity with German, Latin, and Italian.
- Have fun being creative through art, particularly drawing (my stick figures have come a long way!). 🔗 Portfolio: http://art.alonso137.com