Jayson **Amati**

Software Engineer · Researcher · Software Designer

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"Wisdom Begins in Wonder."

Summary

Problem Solving is my forte. The process of framing a problem in the right way, designing a solution, preferably technological and testing if it indeed solves the problem is one that i find joyful and exciting. Have been developing software related solutions to problems that i see around me and also ones that have been described to me. 5+ years of working with various technology stacks and in diverse problem domains.

Love to participate in tech communities and sharing knowledge and experience and contributing through writing to the wide array of information on the internet and open source projects. Always learning new tools and technologies along with novel frameworks of thought from the realm of mathematics. Interested in communicating with clarity on solutions to problems and also demonstrating an understanding of a particular problem. I'm also striving to being a Research mathematician.

Work Experience

Open Source Software, RikaResource   *Nairobi, Kenya*
Primary Contributor & Software Engineer & Mathematical Researcher   *Aug. 2022 - Present*

- Designing Software for an autonomous Collective.
- Developing mathematical foundations for the peer to peer resource control hive
- Implementing a web platform using the ihp haskell framework and leveraging the shipnix deployment platform for nixOS based systems
- Integrating Formal Methods in the software development process to ensure high levels of program correctness using Agda
- Establishing a programming style guide for contributors

Color Corporation Limited.   *Nairobi, Kenya*
Founding Member & Software Engineer   *Dec. 2017 - Jun. 2021*

- Designed and Developed various android applications
- Integrated Payment Services for various platforms, in particular Mpesa Payments
- Established architecture for leveraging google places API for various use-cases
- Provisioned Firebase for monitoring, A/B testing, analytics, authentication, firestore, storage and cloud functions for the various mobile applications

Certificates

Jun. 2016 **Android Developer**, Emobilis Institute

Dec. 2017 **Moringa School Programming bootcamp**, Moringa School

Presentation

React Developers Kenya Meeting   *Nairobi, Kenya*
Presenter for <Functional Programming Concepts in React>   *Nov. 2022*

- Introduced the paradigm of Functional Programming to the audience
- Showed the similarities in concepts between react and Functional Programming, particularly Haskell

Education

Chalmers University of Technology   *Online*
PhD course on Functional Programming and Climate Impact Research   *Mar. 2024 - Present*

- Effectively use Haskell and Agda for formalisation
- Understand a selection of topics in Climate Impact Research
- Use functional programming specification / implementation / formalisation as a way of understanding new domains

IOG(IOG Education Kenya)   *Nairobi, Kenya & Online*
IOG Bootcamp Kenya   *Aug. 2023 - Oct. 2023*

- Zero to Productive Haskell and Smart Contract Developer

UON(University Of Nairobi) *Nairobi, Kenya*

B.S. in Economics And Statistics *Jan. 2017 - Dec. 2021*

- Received a research based education from the institution
- Conducted Research on Inflation in order to receive degree
- Applied mathematical reasoning and statistical methods to model real world problems

Extracurricular Activity

Economics Debate Forum *Nairobi, Kenya*

Member *Jun. 2018 - Mar. 2021*

- Organized colloquia on economics matters
- Gave talks on using various software tools in python to do data analysis and visualizations

Google Developer Group: UON Chapter *Nairobi, Kenya*

Member & Attendee *Jan. 2018 - Mar. 2020*

- Gained exposure to the software industry through the live coding sessions and tutorials in meetings
- Attended various talks and presentations on Software related topics
- Participated in discussions around programming and software development

Skills

Mobile	Android (Kotlin), Android (Java)
DevOps	Docker, Kubernetes, GitHub Actions, ShipNix
Back-end	Servant, Actix, Express, REST API
Front-end	Elm, React, HTML5, TailwindCSS, Jetpack Compose
Data	numpy, scipy, Pandas, PyTorch, networkx, Jupyter
Programming	Haskell, Rust, Javascript (Node.js), Julia, Python, JAVA, Kotlin, LaTeX
Languages	Swahili, English, Kamba