



**Nairuby**

**In Collaboration with BantaMik and  
Riara University  
Brings you  
RUBY CONFERENCE KENYA 2018**

**Programme**

**THEME**

**“Agile, Open source and Entrepreneurship”**

**Dates: 28<sup>th</sup> June 2018 to 30<sup>th</sup> June 2018.**

**Venue: RM G15, Riara School of Computing Sciences, Riara  
University, Mbagathi Way, Nairobi Kenya**

**Website: <http://rubyconf.nairuby.org/2018>**

## **1.0 Introduction**

Ruby Conference brings entrepreneurs, developers, open source contributors, and conference speakers from all around the world for a 3-day conference. Why? We believe in a holistic approach we would solve so many problems through entrepreneurship approach “Solution approach” and open source approach. This in return empowers everyone who attends with technology “tool” and

entrepreneurship “Methodology” to reach their fullest potential and inspire the rest of the world and their communities.

Finding the complete solution for Africa will involve many different parties and many different techniques. Open source culture must be included in that toolkit to spur growth, innovation, and upliftment. By investigating their respective indicators in socio-economics, ICT penetration, and business environments, countries can determine which open source approach and practices suits them the best. Not every country will pursue the same open source and tool path, however, finding that best fit for each country’s need should be a critical area of focus for open source experts in the years to come.

Nairuby is a community organization made of developers, entrepreneurs and freelancers. In terms of development the community focuses on ruby technologies and frameworks, which are all open source and widely used by startups to prototype and carry out proof of concept with a go to market strategy. The community brings you Ruby conference every year with different themes to help spur innovation and growth in contribution to global economy.

## 1.1 Objectives

1. To champion open source culture
2. To equip entrepreneurs with relevant skills and experience required in the industry
3. To provide a collaborating and networking platform for developers, entrepreneurs, academia and designers.
4. To increase contribution and participation of African developers in the world open source contribution

## 1.2 Outputs

The following are expected outputs from the Ruby Conference Kenya 2018



1. Engage developers and entrepreneurs in use and contribution of ruby, Open source and other tools to solve problems
2. Create linkages between the diversity of stakeholders in the industry.
3. Discuss how Academic and industry can grow and improve the adoption and support of open source.
4. Showcase and feature various startups and successes of open source and Nairuby community.
5. B2B and B2C networking

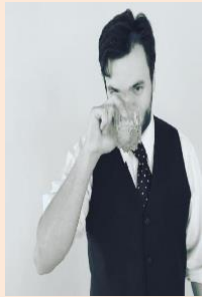

### 1.3 Target Audience

- Academia
- Developers
- Entrepreneurs
- Private sector
- Innovators
- Investors
- Media
- Hackers

## 2.0 Schedule

Thursday 28th June, 2018 – Ruby Conference Kenya 2018  
#RubyConfKe2018


8:00 AM - 8:30 AM	Registration and Networking	
8:30 AM - 9:00 AM	<b>Opening Presentation</b> Local or International visionary speaker to present to the entire audience on <b>Topic: “Nurturing Innovators” By Prof. Robert Gateru</b>  Prof. Robert Gateru is the holder of a PhD in Microelectronic Engineering & Semiconductor Device Physics from the University of Surrey (UK), Masters in Microelectronic Engineering & Semiconductor Device Physics from the University of Cambridge (UK) and BSc. (First Class Honours) in Physics from the University of Nairobi.	
9:00 AM - 9:45 AM	<b>Opening Presentation</b> Local or International visionary speaker to present to the entire audience on <b>Topic: “At 13, My Journey as a Software Developer”</b> <b>@sam_epodoi</b> <b>Samhez</b>  Samuel Epodoi loves turning ideas into reality through code. He is very enthusiastic about Artificial Intelligence, algorithms and serial entrepreneurship. He loves working with Ruby/ruby on rails and He writes a lot of PHP, server-side and front-end code. He enjoys photography, soccer and Athletics. <b>Abstract:</b> During this presentation. He will present about how he started coding. What projects he has worked on using the ruby and ruby on rails stack and address how ruby has helped him.	
9:45 AM - 10:30 AM	Speaker	<b>Caleb Thompson</b> <b>Topic: How I built Software to Kill People</b> <b>@calebthompson</b> <b>Heroku</b>

		<p>Speaker, developer, painter, gamer: an eccentric eclectic. Caleb is currently coding mostly in Ruby and Go. He's not a fan of the SPA.</p> <p>He has braved the wintry tundra of Alaska and the harsh deserts of Arizona. He has fired a Mosin-Nagant without blinking, fought the Red Menace, built Battleship Couch and killed a bear and wore its pelt.</p> <p>He enjoys fine wines, craft beers, and punching comets.</p>  <p><b>Abstract</b></p> <p>I worked on a Wi-Fi geolocation app for a DoD contractor. When I realized its use was to track down and kill people. I was faced with moral dilemma. I'll share the technical details of the app that made it so interesting to me &amp; discuss the ethics of building tools without understanding their use.</p> <p>In 2011, with a team of interns at Department of Defense contractor, I created a Wi-Fi geolocation app to locate hotspots. It could find the location in 3D space of every hotspot near you in seconds. We made formulas to model signal strength and probable distances. We used machine learning to optimize completion time and accuracy.</p> <p>I was so caught up in the details that it took me months to see it would be used to kill people. What do we do when we discover that we're building something immoral or unethical? How can we think through the uses of our software to avoid this problem entirely?</p>
10:30 AM - 11:00 AM		<b>Tea Break</b>
11:00 AM - 11:45 AM	Speaker	<p><b>PJ Hagerty</b>  <b>Topic: Rails? Still?!?</b>  <b>@aspleenic</b>  <b>DevRelate.io</b></p>  <p>Developer, writer, speaker, musician, and founder of DevRelate.io, PJ is known to travel the world speaking about programming and the way people think and interact. He is also known for wearing hats.</p> <p><b>Abstract</b></p>

		<p>Rails is amazing - from MVC to convention over configuration. Rails has helped start many businesses, launch many products, and gotten so many people into coding. But...is something missing?</p> <p>What about the alternatives? Trailblazer, Sinatra, Cuba, Volt, Lotus... even (gulp) Phoenix and Elixir?!?</p> <p>This talk will take a look at when to use Rails and when it might be better to use an alternative. We will also talk about what those alternatives are and where they fit in the rails world.</p>
11:45 AM - 12:30 PM	Speaker	<p><b>Aaron Cruz</b>  <b>Topic: Boom! Zap! PoW!</b>  <b>@mraaroncruz</b></p>  <p>Aaron is building a more user friendly layer on top of block chain projects. He is an Elixir programmer and crypto mining farm manager. He loves nyama choma and wants to eat it right now.</p> <p><b>Abstract</b></p> <p>Even my grandma has been telling me about "The Blockchain" lately. Well, that's not true, but it could be true in today's cryptophile climate.</p> <p>I've been managing a mining farm, consuming thousands of kilowatt hours for most of the last year. The question people ask me the most is "Why do you have to use soooo much energy?" and the answers to this question bring up a lot more questions that almost always lead to the question asker frustratingly saying "That's soooo stupid!"</p> <p>In this talk I will explain what Proof of Work (PoW) is, the pros and cons (i.e why it is and isn't soooo stupid), some alternatives and we'll even do some mining in Ruby!</p>
12:30 PM - 1:15 PM	Speaker	<p><b>Zephania T. Opati</b>  <b>Topic: Stolen Strategies; What entrepreneurs can learn from Terrorist about Corporate Strategy</b>  <b>@tzopati</b>  <b>Riara University</b></p>  <p>Thaisaiyi Opati is currently the Head of Department Riara School of Business. He holds a Bachelor Degree in Business Administration (Marketing) from Maseno University, an MBA from University Teknologi Mara- Malaysia and is currently pursuing PHD in Marketing at St. Paul's University. He has taught Riara University and Jomo Kenyatta University of Agriculture and Technology. He has consulted for United Nation Volunteer Association and Global Village Publishers as a business writer. He has contributed widely in the Business Daily, The Marketing Society of Kenya "sokoni" Magazine and Diplomat East Africa and the African Executive. He has published two books "Personal branding – King Solomon way in (2012) and The Terrorist in the Boardroom 2016. He is a commonwealth scholar, a member of the Chartered Institute of Marketers (UK). He is also a member and serves as the election board member of Academy of International Business AIB (sub-Sahara Chapter). His interest is in Branding strategy and international Marketing.</p> <p><b>Abstract</b></p> <p>A detailed look into the terrorist strategies will reveal approaches used by great brands, business entities and personal brands all around the world. In fact, most Fortune 500 companies practice one or more of these tactics at one point or another</p>




		during their product lifecycle. They are strategic in planning, they employ the 8-8-8. When it comes to employment Terrorists tend to employ 'crazy men.' As Steve Jobs put it "only men who think they are crazy enough to change the world are those who do." While nominal entrepreneur sales his brand beyond the reasonable doubt, the terrorist sells his beyond unreasonable belief."
1:15 PM - 2:00 PM	<b>Lunch Break</b>	
2:00 PM - 2:45 PM	Speaker	<p><b>Yatish Mehta</b>  <b>Topic: Taming the Rails Monolith Mammoth</b>  <b>@yatish27</b>  <b>Coupa Software</b></p>  <p>Yatish Mehta is a Software Engineer at Coupa Software, NC State Graduate. He has been part of Fab.com and Sungard, Ruby is my first love and He is still committed to her. Recently, He has started to with Golang. If not experimenting with software, He loves experimenting with flavors. He is a big suits fan.</p> <p><b>Abstract</b></p> <p>Ruby on Rails patterns are amazing for prototyping. While the general Rails practices are really useful for some apps, they are not apt for a large scale applications . You need super powers to tame such a monolith mammoth. What are those super power you ask, come let's take a look!</p>
2:45 PM - 3:30 PM	Roundtable	<p><b>Open source in Entrepreneurship</b>  <b>Moderator: "Bernard Banta"</b>  <b>Panelists</b></p> <p>1. Charles Kirui, Eric Kinyeki, Aaron Cruz, Brian Holt, Kirsten Westeinde, William Wanyama, Joannah Nanjekye</p>
3:30 PM - 4:15 PM	Speaker	<p><b>Ruberto Paulo</b>  <b>Topic: A Practical Guide to Taming Wild Chatbots</b>  <b>@rob_legend</b>  <b>Prodigy Finance</b></p>  <p>Currently working at Prodigy Finance as a Software Engineer. Ruberto is passionate about all things Ruby. He is an organizer at the South African ruby conference 'RubyFuZa'. He spends much of his time on his Hobbies which he funds by selling old equipment from previous hobbies</p> <p>I really love the Ruby community and all it does to make the world a better place. I spend most of my spare time on reading and developing new skills.</p> <p><b>Abstract</b></p> <p>The way we communicate with technology is ever-changing! From landline to the cell phone, letters became email, emails became text messages; we are constantly</p>

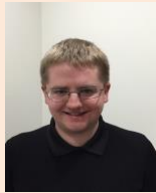
		<p>looking for effective ways of having our message understood and then getting the richest data in response. Could Chatbots be the next step?</p> <p>I have recently been playing a lot with Dialog flow, a free to use AI developed by Google that is used in Chatbots.</p> <p>The talk will go through the evolution of digital communication, what makes effective communication and then how we could replicate that within a chatbot. I will then take you through the process of integrating a Chabot with Facebook messenger and finally how to then get important data from the user into our rails app. This could change the way we onboard users to our applications, and create a unique personal touch when interacting with our users.</p> <p>The talk will be half technical and a half practical. With the first portion of the talk being how we communicate with our users and their cognitive biases with regard to how they expect we will respond. We can then Teach Googles AI some new interactions in real time and then see how it will react to our users. The talk will include a practical how-to guide so that anyone sitting watching can then go home and do exactly what they see.</p>
4:15 PM - 4:30 PM		<b>Break</b>
4:30 PM - 5:15 PM	Speaker/Case Study	<p><b>Sigu Magwa</b>  <b>Topic: Doing CI/CD on GitLab</b>  <b>@s_igu</b>  <b>Podii</b></p>  <p>An open source enthusiast who is a remote volunteer developer an open source community AgileVentures. Currently a member of Podii - software company based in Kisumu Kenya. Previously worked remotely as a coach and developer at the Swedish based academy and company Craft Academy. Been working with Ruby on Rails for a while and has a growing interest in Elixir and Phoenix.</p> <p><b>Abstract</b></p> <p>In agile web development, continuous integration is a critical part of the process. Did you know you can have Continuous Integration, Continuous Delivery, and Continuous Deployment within the same web interface? Learn how this is done on Gitlab</p> <p>Agile methodology involves pushing code frequently and making sure nothing breaks. Gitlab has an integrated system that allows us to continuously run tests to avoid regression failures in our code. Also of interest is how Gitlab uses Docker and kubernetes in achieving all these. We can have a look at how to set up for CI/CD and a behind the scenes on what happens</p>
5:15 PM - 5:30 PM	Day 1 Close	<b>Closing Remark</b>



# Friday 29th June, 2018 – Ruby Conference Kenya 2018

## #RubyConfKe2018

8:00 AM -	Registrations and Networking	
8:30 AM -		
8:30 AM -	Speaker	<p><b>Kirsten Westeinde</b></p> <p><b>Topic: Deconstructing the Monolith: designing software that maximizes developer productivity</b></p> <p><b>@kmkwesteinde</b></p> <p><b>Shopify</b></p>
9:15 AM		 <p>Kirsten Westeinde is a technology enthusiast and a lifelong Learner. She is a senior software engineer at Shopify, where she solves challenging we development problems every day. She has worked with Ruby on Rails for ≈ 5 years, and is constantly adding new tools to her technology tool belt. She is passionate about building diverse teams, and gaining new perspectives through travel and cross cultural communication. When she's not working, you will most likely find her out exploring in nature.</p> <p><b>Abstract</b></p> <p>Working with monolithic codebases can be tedious and kill developer productivity. We'll discuss implementation details of two possible alternatives. We'll discuss how to identify when an app has become a monolith in need of a refactor, and present patterns and tools to do said refactor.</p> <p>Having worked extensively in the Shopify codebase, one of the largest rails apps in existence, I have experienced firsthand some of the downsides of working in monolithic codebases. I have worked on a project team that extract an entire product out of Shopify into its own app, and have lots of insights/stories to share from this experience. On another project team, we built a micro service architecture from the get go. I learned a lot about the topic from all of these experiences (all in Ruby) and am excited to share some code samples, and stories of what has worked and what hasn't for us at Shopify.</p>
9:15 AM -	Speaker	<p><b>Paul Stefan Ort</b></p> <p><b>Topic: Reflection in Ruby: Understanding the Implications of Loading Gems and Files</b></p> <p><b>@PaulStefanOrt</b></p> <p><b>Def Method</b></p>
10:00 AM		



Paul Stefan Ort <https://www.pso.io> makes software at Def Method (<https://www.defmethod.com>) in New York City, where he works on improving the experience of maintaining applications and leading engineering professional development. He is the primary developer of Dependable (<https://www.dependable.io>), a set of developer tools that provides automated insight into new versions of third-party dependencies. He is a classical violinist and pianist when not programming or reading.

### Abstract

Have you wondered what is provided by a gem? What about monkey patches? Can you be sure that new changes do not conflict with old ones? We will demonstrate how to use Ruby's built-in reflection methods to address all of these topics, building up from foundations available to every Ruby developer.

- Introduction to Ruby methods for detecting available classes and methods
- Detecting classes and methods made available by requiring a gem
- Detecting direct modification of existing behavior (via monkey – patching)
- Detecting indirect modification of existing behavior (module inclusion)
- Recommendations for further exploration of the topic

This live coding talk is accessible to beginners, and contains material useful for experts

Building from tools like **Object constants** and **Object const\_get**, it uses short examples to demonstrate discovery of details from gems, monkey- patches, and modules.

I have been refining this presentation over the last few months, giving versions of it at B'more on Rails, NYC.rb, the New York Public Library, and (most recently) the DC Ruby Users' Group (to positive reviews).

10:00 AM  
-  
10:45 AM

Speaker/Case  
Study

**Tim Rogers**

**Topic: Miles More Maintainable: Building APIs with the  
Middleware Pattern**

**@timrogers  
GoCardless**



Tim is a Software Engineer at GoCardless, a fintech startup based in London building a global bank-to-bank payments network for the internet.

Since joining GoCardless 6 years ago, Tim has worked across the business in a variety of roles, from running the customer support operation in the company's first few years to helping the sales team build effective practices and processes.

He loves spending his day building powerful and well-documented APIs to maximize developer happiness.


### Abstract



When you're building an API, things start simple. But before you know it, there's logic to reuse, from authentication to validation. This usually means a confusing list of **before\_actions**. But there is a solution: moving from convoluted controllers to robust, maintainable chains of middleware.

When you're building an API, things start off simple. But before you know it, there's lots of logic you want to build abstractions around and reuse - for example authentication, input validation and pagination.

This usually means having a long list of callbacks living in your **ApplicationController** using **Action Controller's before\_action** magic. This leads to:

tangled data dependencies (where callbacks depend on data retrieved by other callbacks and stored in instance variables - the authenticated user, for example) hidden behavior (all those excepts and only on your **before\_actions** are hard to

		<p>reason about and separated from your code, usually living in ApplicationController!) difficulties with testing (unit testing methods inside a controller is hard!)</p> <p>The middleware pattern can help us to bring sanity to our APIs and make them miles more maintainable</p> <p>This pattern, used by Elixir's Phoenix, Node's Express and even Ruby's Rack helps us to untangle our data dependencies, make our code much more explicit and easily unit test complex behavior. We can apply this pattern to our Rails application to move faster and write more maintainable code.</p> <p>In this talk, you'll learn how to move from convoluted controllers to robust, maintainable and well-tested chains of middleware built using an open-source gem, Coach (<a href="https://github.com/gocardless/coach">https://github.com/gocardless/coach</a>).</p> <p>Each middleware can do exactly one job - for example, authenticating a user or validating input - and then either send a response to the client (for example an "invalid access token") error or it can pass data along (for example the authenticated user) and call the next middleware.</p> <p>This talk is based on a blog post I wrote, "When good controllers go bad: getting started with Coach" (<a href="https://gocardless.com/blog/getting-started-with-coach/">https://gocardless.com/blog/getting-started-with-coach/</a>).</p>
10:45 AM - 11:00 AM		<b>Tea Break</b>
11:00 AM - 11:45 AM	Speaker	<p><b>Brian Holt</b></p> <p><b>Topic: Chaos Monkeys in Your Browser: What Chaos Engineering Means for the Front End</b></p> <p><b>@holtbt</b></p> <p><b>Microsoft</b></p> <div>  <p>Brian is currently working as a senior cloud developer advocate at Microsoft and he's all about developers, developers, developers. Previously he was a JavaScript engineer at Netflix, LinkedIn and Reddit. When not working, Brian finds time to teach on Frontend Masters, run his mouth on Front End Happy Hour, travel all over the world, and play with his adorable dog. Brian is currently a resident of San Francisco, CA.</p> </div> <p><b>Abstract</b></p> <p>Chaos Monkey, but for your web app. Come learn how intentional failure injection is not only good for the back end but also for the front end. Hint: it means you'll get paged less at 3AM, and I think we're all happy about that.</p> <p>Chaos engineering is taking the web development world by storm, and for good reason. Chaos engineering is the emergent methodology of intentional causing random failures into your system. If you're expecting your system to failure at any time, you'll be ready for it when actually fails, right?</p> <p>This, until now, has been a back end practice: causing database read fails, app server lockups and the like. However we as the front end have a lot to gain from intentional failures. As an engineer at Netflix, I first hand got to see the pandemonium that Chaos Monkey causes. But more than that I got to learn quickly where our system came apart when failures happen. I'll be share with you my hard-earned knowledge of how intentional failure injection can help your system be more resilient.</p>

11:45 AM - 12:30 PM	Speaker/Case Study	<p><b>Joannah Nanjekye</b> <b>Topic: Ruby in containers</b> <b>@Captain_Joannah</b></p>  <p>Joannah Nanjekye is a Rails girls summer of code alumni , Software Engineer and Aeronautical Engineer to be from Kampala, Uganda that has held two programming positions working on fintech projects. she writes a lot of python , ruby and golang. She is a proud open source contributor where started in summer programs like outreachy and Rails girls summer of code working on qutebrowser and Ceph writing. She is the author of Python 2 and 3 Compatibility a book published by Apress. When not coding, she gets curious about space and galaxies plus a bit of guitar</p> <p><b>Abstract</b></p> <p>Because of the benefits of containers, ruby applications have been containerized recently. Containers have magically changed the way ruby applications are managed.</p> <p>This talk shall emphasize the different ways we can leverage containers and kubernetes to deploy and run robust applications.</p> <p>Containers have magically changed the way we deploy and manage ruby applications allowing us to build, develop, test, and even deploy ruby applications on a single system with no upgrade downtimes.</p> <p>In this talk, I will talk about how we can containerize and run ruby applications on kubernetes which is the missing layer that gives us the ability to manage many containers by providing features that enable containers to scale, talk to each other and work in harmony.</p>
12:30 PM - 1:15 PM	Speaker/Case Study	<p><b>William Wanyama</b> <b>Topic: Exploring Docker for Rubyists on Windows</b> <b>@wanyama_man</b> <b>Kloeckner.i</b></p>  <p>William Wanyama is a software engineer at Kloeckner.i in Berlin, and a passionate (although remote) member of the Nairuby scene. Having spent a couple of years in Nairobi hustling and bustling with his own tech startup, he now likes to mentor and give back to other upcoming Ruby entrepreneurs in the region..</p> <p><b>Abstract</b></p> <p>Docker development on windows has come a long way. So long that perhaps it's time for Ruby developers to take note and finally cross the final frontier.</p> <p>Using a rails workshop as a study case, this talk explores the challenges faced in getting set-up for basi rails development using docker on windows. It also looks to leverage the benefits of docker over other traditional installation methods on windows.</p>
1:00 PM - 2:00 PM	Lunch Break	
2:00 PM - 2:45 PM	Speaker	<p><b>PJ Hagerty</b> <b>Topic: Ruby Groups: Act Locally – Think Globally</b> <b>@aspleenic</b></p>

		<p><b>DevRelate.io</b></p>  <p>Developer, writer, speaker, musician, and founder of DevRelate.io, PJ is known to travel the world speaking about programming and the way people think and interact. He is also known for wearing hats.</p> <p><b>Abstract</b></p> <p>There are thousands of local Ruby Groups worldwide. Sadly, many suffer along, become stagnant, some even die off. How can you make your local Ruby Group better and in so doing, improve the global Ruby Community?</p> <p>This talk focuses on the human side of getting a group together and making it successful so the members, as a group can contribute to the larger community. It is a university useful guide to improving all parts of the ruby community, starting on a local level.</p>
2:45 PM - 3:30 PM	Speaker	<p><b>Paul Oguda</b>  <b>Topic: A Jedi Without A Master</b>  <b>@kamalogudah</b>  <b>Tezza Business Solutions</b></p>  <p>Paul Oguda was supposed to be a Spatial Planner, but now he codes. He will still code, even if he go back to Spatial Planning. He speaks in Ruby, Crystal (It is still Ruby), some Python, Elixir (because Erlang is strange), JavaScript, and Haskell. In my spare time He is a faux Chef trying to understand the science of Molecular Gastronomy through watching cooking shows. He believes supporting Manchester United gets you close to heaven. Lastly, He supports the Wenger Out movement, their concerns are genuine.</p> <p><b>Abstract</b></p> <p>Formal training is advisable for many careers. However there are situations where all you have is the passion to learn something and formal training is not for you due to a number of issues. Self-teaching aka Auto didacticism helps one to become versed in a new career. Career pivoting is possible through a number of avenues, self-teaching is one of such avenues. Hence the inspiration and basis for this talk.</p>
3:30 PM - 4:15 PM	Speaker	<p><b>Charles Kirui</b>  <b>Topic:</b>  <b>Riara University</b>  <b>@CharlesKiruii</b></p>  <p>Eric is a graduate of Johns Hopkins University of Technology in Baltimore Maryland USA in 2010 with a Masters of Fine Arts (MFA) in Design Visual Communication with top honors and gaining universal core skills in cinematography, audio and visual effects, multimedia journalism, critical thinking and analysis and Art Institute of Atlanta in 2008 with a Bachelor of Arts in Media Studies (BA) – Audio production and Engineering and digital film studies, where he learnt the art of Digital audio production, recording technology, 3D animation,</p>

		illustration, typography arts, photography, special effects, music studio business and industry, graphic design.
4:15 PM - 4:30 PM	<b>Break</b>	
4:30 PM - 5:00 PM	Speaker	<b>Closing Session</b> Ruby Chairman, Riara University Rep.
5:00 PM - Onwards	Networking Session	<b>Networking</b>