devconf;

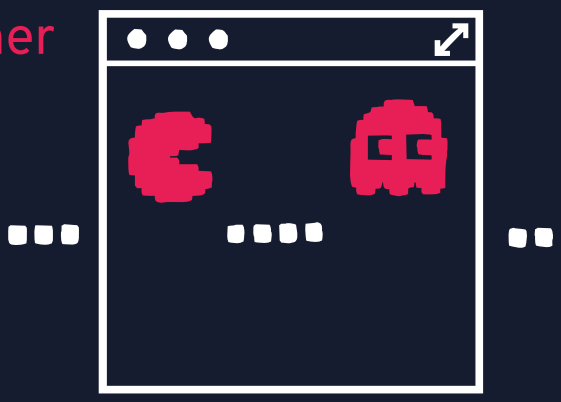
SOLVING TODAY AND TOMORROW'S CHALLENGES

CPT_JHB 2020

CPT_ 31 March_Century City Conference Centre

JHB_2 April_Gallagher Convention Centre

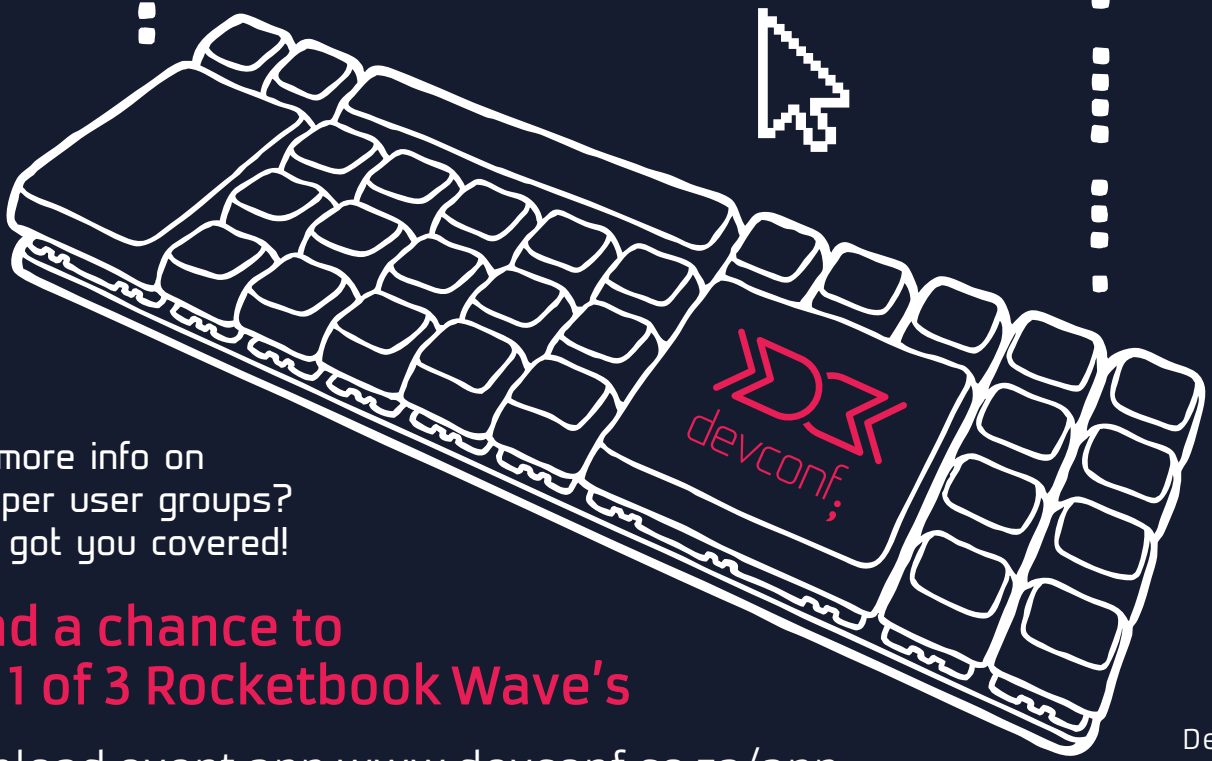
Message from your DevConf Hosts



Is there a difference between being selfish, a "team player", and being a selfish team player?

CPT Agenda and Floor Map

JHB Agenda and Floor Map



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Meet the DevConf Speakers

DevConf is in its **5th year** of tackling current and future challenges in SA's software development environment!

A Word from the Hosts

Welcome to DevConf 2020!

We, Candice Herodotou and Robert MacLean, are delighted you could join us. It's both a pleasure and a privilege for us to be able to host this event for the 5th year running.

DevConf was originally conceived by Developer User Group (DevUG) committee members, who are committed to building a community of software developers in the South African industry. While the event was started by the DevUG, it is not and never has been the user group's event. DevConf belongs to all those who attend the event. The content is produced by speakers from the community who give up their time to practise and deliver it and the agenda is selected by a diverse panel of community members.

' The feedback provided each year influences the next year and every year DevConf improves because of you '

DevConf is not just about technology; it is about everything developer and we hope that this is reflected in the far-reaching impact from the talks both past and present. The most recent example is Riaan and Tanya du Plessis' presentation about burnout in 2019, which has had a profound effect on our community. We have received several personal accounts following this presentation. It offered crucial awareness, and led to many people courageously seeking the help they so badly needed. We never imagined that a tech conference would be the catalyst for people's lives to be altered so meaningfully. It's unbelievably humbling.

The challenge each year is to preserve this magic, while still offering you something new. We love that our South African speakers keep developing new content so that they can come back and present again and again, and we are so proud to introduce you to a new generation of speakers with fresh perspectives and diverse backgrounds. We are also excited to have moved to more spacious venues in both cities, especially as this means we can now offer a 5-track event to both our Cape Town and Johannesburg audiences.

We would like to take this opportunity to thank our sponsors, our partners, and our audience members. It wouldn't be possible to make our DevConf dreams reality, if it were not for all of you.

If this is your howmanyeth time attending, your continued support means everything to us. If this is your first time, then we hope to make your day with a variety of carefully selected content, and we encourage you to take advantage of the opportunities to network with speakers, sponsors, and fellow attendees. May you all leave DevConf feeling energised and having made at least one new friend!

Your hosts,
Candice and Robert

"I have found that some of the most exciting and rewarding aspects for me are the hallway conversations and talking to people around the sponsor area and over drinks after the event." - **Robert**

"DevConf has always been about learning, sharing, and connecting and I believe we've built a safe space for that to happen and strengthen with each event." - **Candice**

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AGENDA; CAPE TOWN

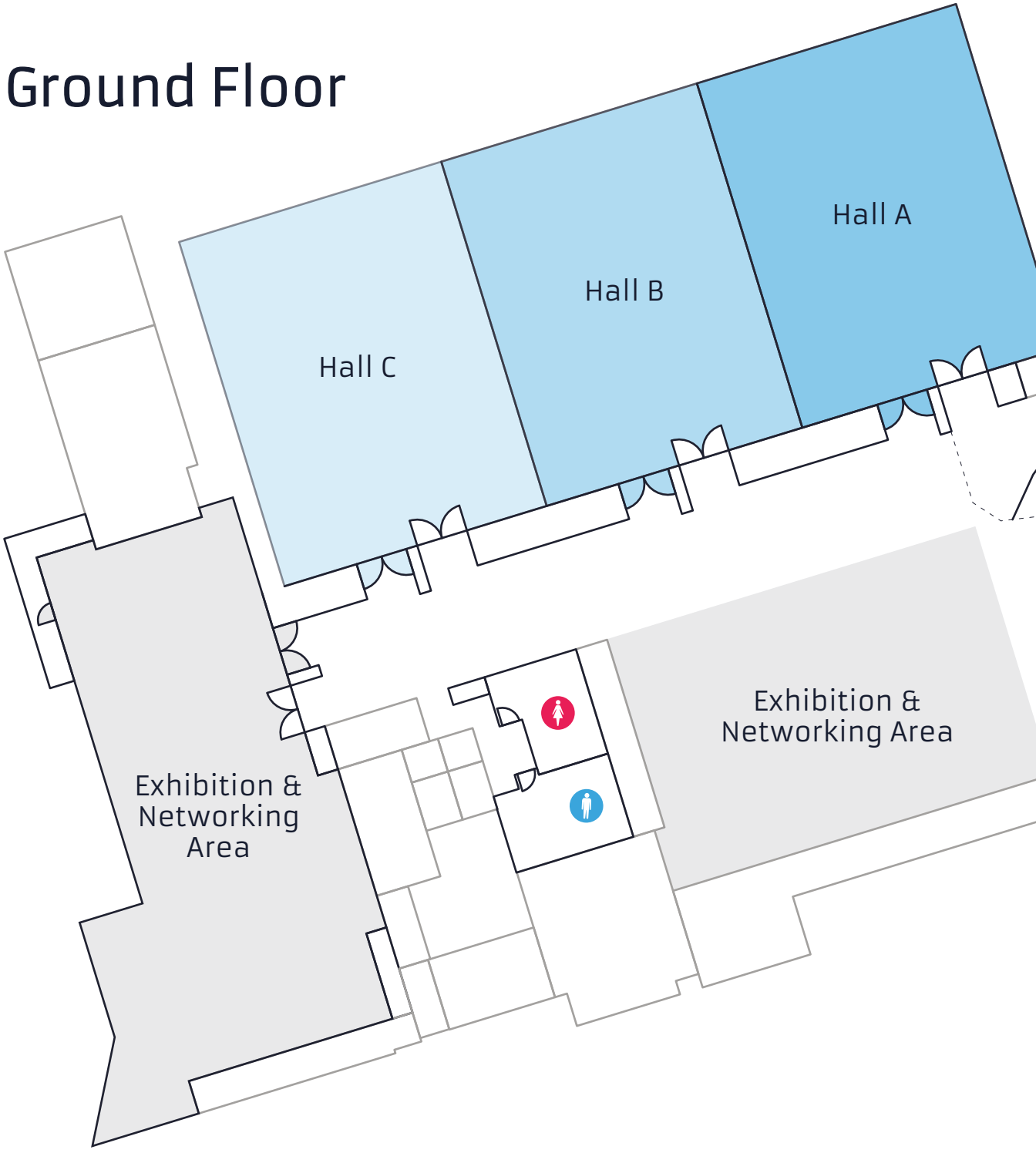
Time	Hall B	Meeting Room 11	Hall A	Hall C	Meeting Room 8 & 9
7h15 - 8h30	Registration				
7h30 - 16h00	Expo area opens				
8h30 - 8h45	Opening address by Candice Herodotou and Robert MacLean				
8h45 - 9h30	Keynote: The Selfish Team Player with J.B. Rainsberger				
9h30 - 10h00	Movement, networking and snacks				
10h00 - 10h50	**Mystery Speaker** To be announced	**Jaen Swart** Kubernetes Native Agile Integration	**Vanessa Raath** What are you doing to ensure that you stand out in the South African IT Industry?	**Mark Heckler** How to use Spring Security to supercharge AppSec with OpenID Connect & OAuth2	**Natu Lauchande** Machine Learning System principles with Python and MLFlow
10h50 - 11h00	Movement				
11h00 - 11h50	**Ferdi Redelinghuys** A Survival Guide for a start-up CTO	**Cobus Bernard** Automating your cloud: what are the building blocks?	**Troy Mcnamara** Choosing tools for those Pipelines that get you to Production painlessly	**Pamela Hill** Remote work: Succeeding as a team	**Rachel Appel** Be an A11Y! Build better software by building accessible software
11h50 - 12h00	Movement				
12h00 - 12h50	**Clifford de Wit** Building a Smart Home that really works. My real-life story of building a Smart Home	**Renette Ros** How I built a multi-platform game engine in Kotlin	**Lizette Spangenberg** Machine Learning: adding new possibilities to UX	**Darko Mesaroš** Taking Serverless to the next level	**Pieter van der Merwe** The struggle to find devs in SA is real!
12h50 - 13h40	Lunch				

AGENDA; CAPE TOWN

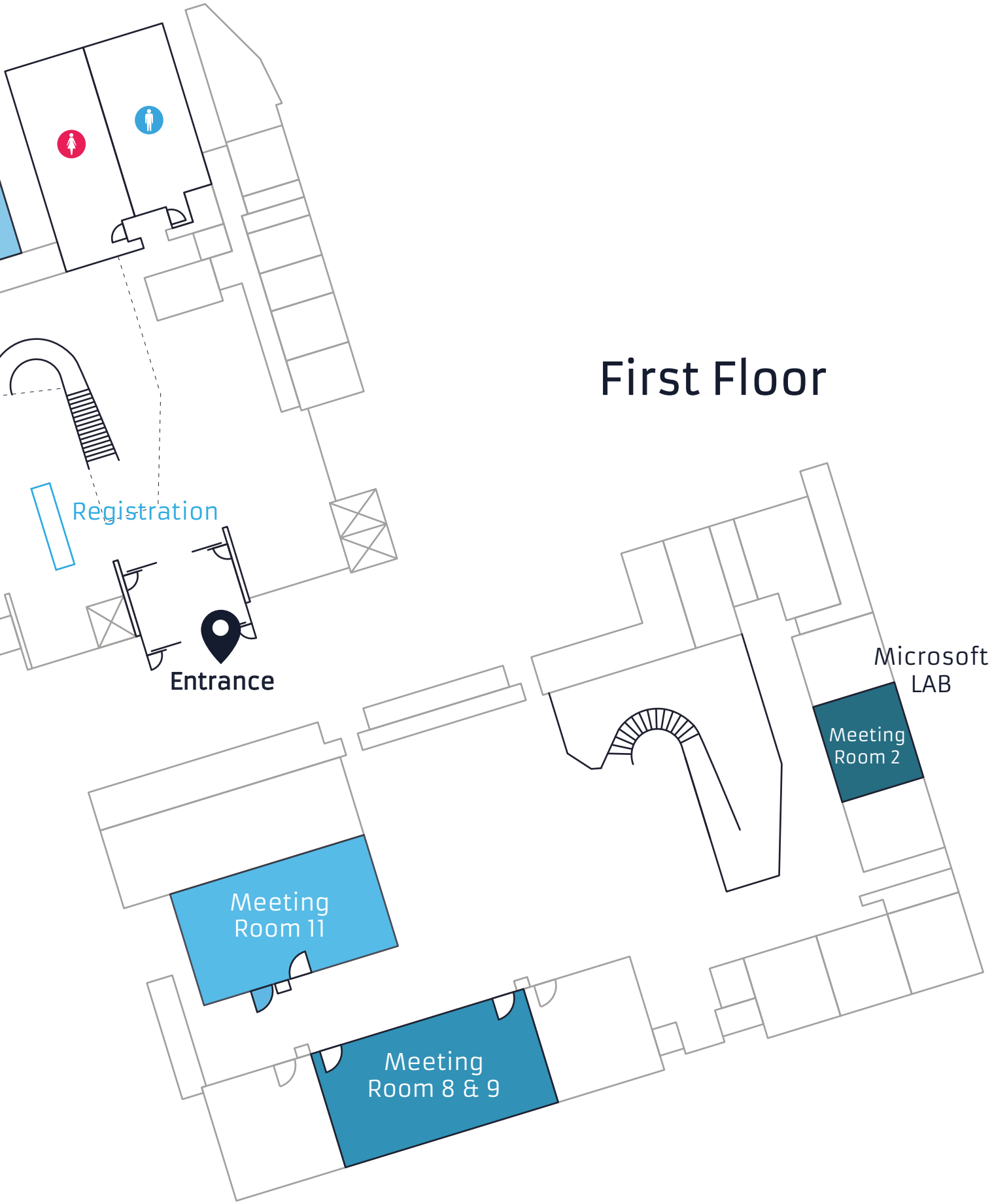
Time	Hall B	Meeting Room 11	Hall A	Hall C	Meeting Room 8 & 9
13h40 - 14h30	**Jacques Blom** TypeScript + GraphQL + React = The perfect front-end stack?	**Ronica Singh** RPA in South Africa	**Chris Tite** Turning legacy systems into event streaming marvels: SQL meets Kafka and Event Store	**Nthabiseng Mashiane** Effectively onboarding and integrating new devs into the team	**Paul Zietsman** The Accidental Data Lake
14h30 - 14h40	Movement				
14h40 - 15h30	**Bhekani Khumalo** What Civil Engineering taught me about being a good software developer	**Brian van Vuuren** Building teams that pull together	**Joshua Lewis** It's all fun and games until someone deploys on Friday	**Michael Johnson** What's your bacon number, an introduction to graph databases	**Lorraine Steyn** Systems Thinking
15h30 - 16h00	Movement, networking and snacks				
16h00 - 16h50	**Veronica Schmitt** Dropping some Sbom's : developing a more secure tomorrow for Medical Device Security	**Lukonde Mwila** Why DynamoDB is great for data driven applications	**Matt Cavanagh** Brand Awareness: Teaching our robot overlords to tattoo their humans	**Jamie Hewland** How to know you're doing good: measuring performance in cloud-native systems	**Russel Povey** Why you should consider functional programming
16h50 - 17h00	Movement				
17h00 - 17h50	**Anjuan Simmons** Managing the burnout burndown	**Gerard de Jong** How to install Doom on a Mars Rover!	**Mike Geyser** Diagnosing performance problems with Lighthouse	**Tshepang Lekhonkhobe** Exploring the Rust compiler	**Justin Slack** Farewell Bootstrap and other tales from the new CSS layout
17h50 - 19h00	Networking drinks				

FLOOR PLAN; CAPE TOWN

Ground Floor



First Floor


Registration
Entrance
Microsoft
LAB
Meeting
Room 2
Meeting
Room 11
Meeting
Room 8 & 9

AGENDA; JOHANNESBURG

Time	Hall 4	Gallagher Grill	Ballroom	Auditorium	Gallagher 3
7h15 - 8h30	Registration				
7h30 - 16h00	Expo area opens				
8h30 - 8h45	Opening address by Candice Herodotou and Robert MacLean				
8h45 - 9h30	Keynote: The Selfish Team Player with J.B. Rainsberger				
9h30 - 10h00	Movement, networking and snacks				
10h00 - 10h50	**Clive Sagadevan** Build Smart	**Jaen Swart** Kubernetes Native Agile Integration	**Vanessa Raath** What are you doing to ensure that you stand out in the South African IT Industry?	**Daniel Amber** Should you rewrite?	**Natu Lauchande** Machine Learning System principles with Python and MLFlow
10h50 - 11h00	Movement				
11h00 - 11h50	**Ferdi Redelinghuys** A Survival Guide for a start-up CTO	**Cobus Bernard** Automating your cloud; what are the building blocks?	**Natasha Anderson** Measuring DevOps Value	**Pamela Hill** Remote work: Succeeding as a team	**Rachel Appel** Be an A11Y! Build better software by building accessible software
11h50 - 12h00	Movement				
12h00 - 12h50	**Clifford de Wit** Building a Smart Home that really works. My real-life story of building a Smart Home	**Renette Ros** How I built a multi-platform game engine in Kotlin	**Lizette Spangenberg** Machine Learning: adding new possibilities to UX	**Darko Mesaroš** Taking Serverless to the next level	**Pieter van der Merwe** The struggle to find devs in SA is real!
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AGENDA; JOHANNESBURG

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14h30 - 14h40	Movement				
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16h50 - 17h00	Movement				
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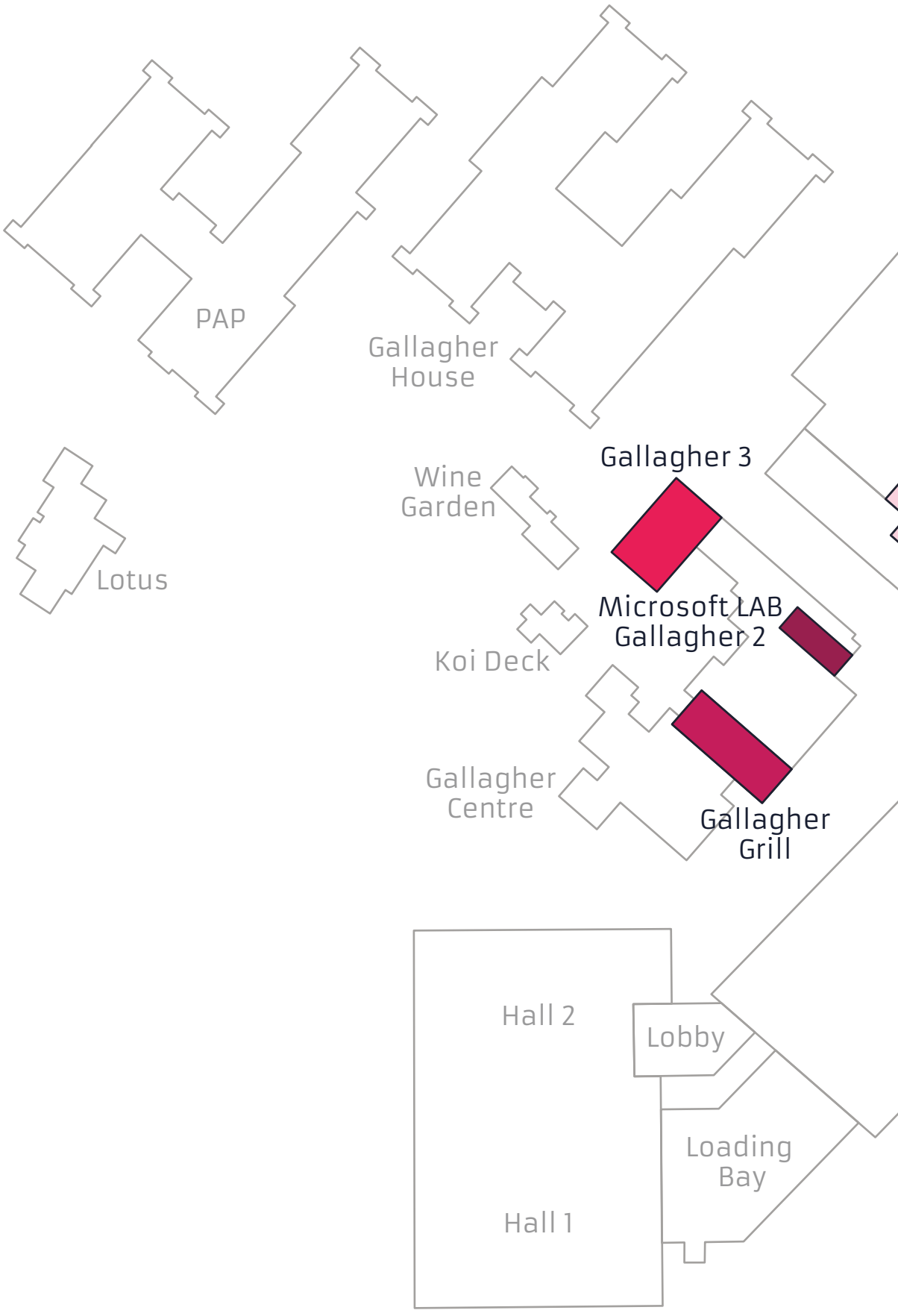
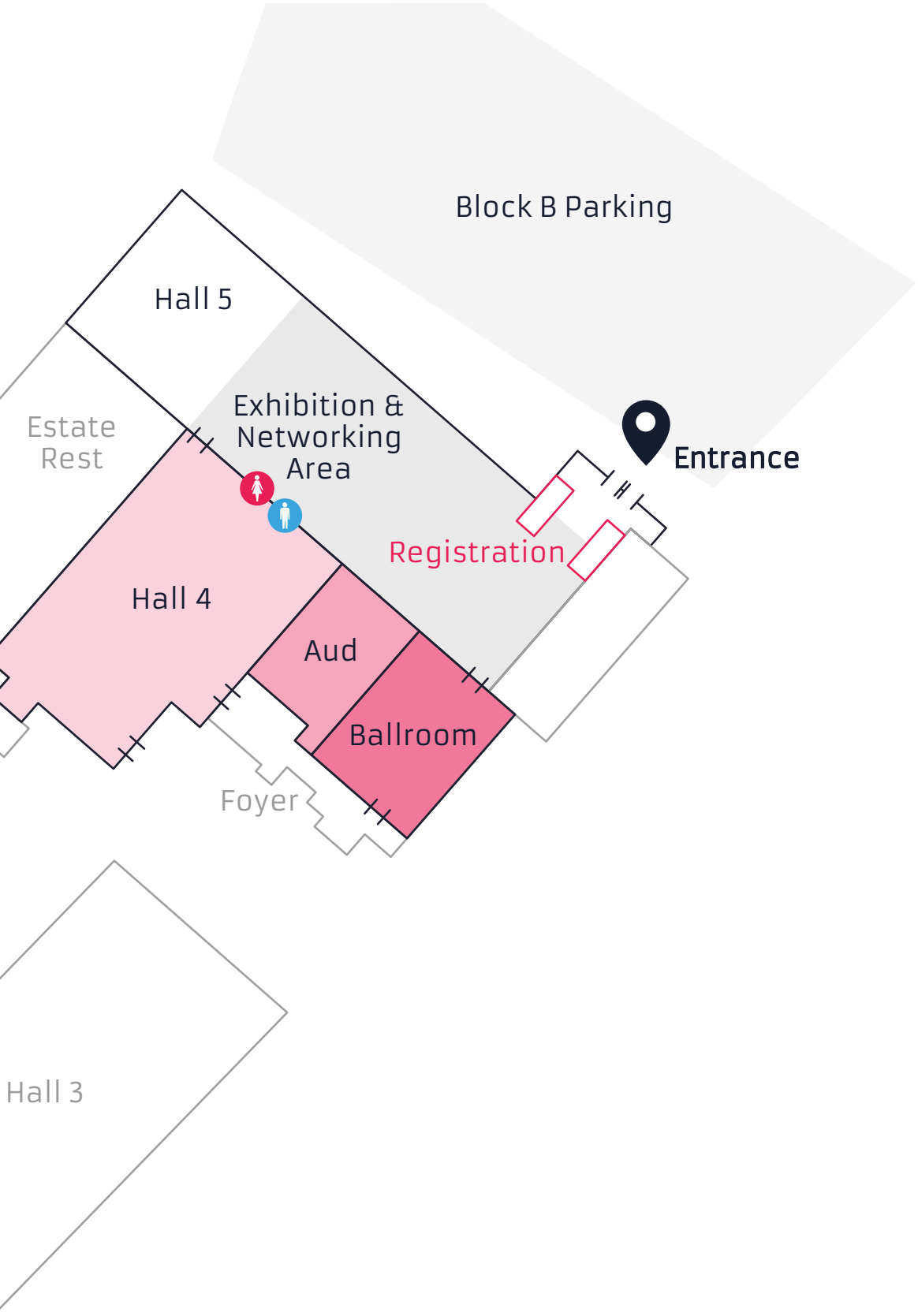
17h50 - 19h00	Networking drinks				

FLOOR PLAN; JOHANNESBURG




Block B Parking
Hall 5
Estate
Rest
Exhibition &
Networking
Area
Entrance
Registration
Hall 4
Aud
Ballroom
Foyer
Hall 3

The Selfish Team Player!

Helping yourself in order to better help others.

When you first see the title of the 2020 DevConf keynote address, there is a slight pause while the reader catches up with the meaning, followed by the inevitable "But wait – team players can't be selfish! Team players have to – by the very nature of their 'team-playerness' – be the complete opposite of selfish." But if that is the case, then what's with this (apparent) oxymoron?

Meet J. B. Rainsberger - the keynote speaker at DevConf this year and the man behind the title.

J. B.'s experience in the industry is broad and includes not just building software systems, but helping software professionals do so more effectively. His journey began when, after years of living the conventional life of a professional programmer, he suffered from burnout which led to depression. This extreme change prompted a shift in his thinking and soon J. B. and his wife Sarah were in the throes of a major life transformation. After years of working the corporate treadmill to fund a lifestyle neither of them was particularly enjoying, they took the decision to downsize their lives and move to a remote part of Canada. This reduced their need for resources by 70 percent and sparked a change which would allow J. B. to not only find a purpose, but to live it every day.

J. B. and Sarah now travel the world helping companies and - more importantly - people in the industry improve their own lives at work. At the heart of DevConf's keynote address is the following thought:

"It is only by relentlessly investing in our own spare capacity that we are able to increase our overall capacity, so that we may give our spare capacity to the system, whatever that may be."

' This talk will address the idea that there is a difference between being selfish, a "team player", and being a selfish team player '

The distinction is important for a number of reasons. Selfish people are motivated to serve themselves. So-called "team players" often agree with the people around them just to get along. Selfish team players are motivated by a need to help themselves so that they may in turn help others. It can be hard to identify another person's motives, but what they choose to do with their spare capacity says much!

J. B. will be highlighting various ways in which we waste our capacity – or indeed how an organisation does the same. He gives us practical examples of this waste, as well as how to correctly identify and then change behaviours which do not protect our capacity. Our speaker will be discussing the art of maximising work not done as opposed to having too much to do, and of course he will be recommending some reading and giving practical examples from his own experience as well as those of the many people he has worked with over the years.

Be sure to join us at 08:45 for the keynote address!

MEET OUR SPEAKERS

Anjuan Simmons_Slalom

Developers are, almost by definition, highly capable and strongly driven individuals. In addition to managing backlogs and burndown charts, technology leaders have to follow an ever-changing software landscape, manage team dynamics, and navigate office politics. People who can get things done often find themselves overwhelmed by their to-do lists. It's no surprise that this leads to burnout. This talk will provide tools to help manage stress and reduce burnout. [CPT]+[JHB]

Bhekani Khumalo_GIS Developer at ESRI South Africa

Now, more than ever, computer science knowledge is necessary for every person - it is a liberal art. In this talk, Bhekani will explain why we should view computer science as a liberal art and why this matters. As a civil engineer turned software developer, Bhekani will share some of the lessons he learned as well as the transferable cross-disciplinary skills he gained when moving into tech from another professional discipline. [CPT]+[JHB]

Brian van Vuuren_Somewhere between an over-educated engineer and getting to grips with front-end dev at Allan Gray - but one thing's for sure: it's all about the people

The concept of 'high performing teams' is well-known in IT, and yet, we so often find that technical teams composed of individual superstars struggle to perform consistently well as a unit. This begs the question - if not individual ability alone, what other elements should we be focusing on to build and grow teams who pull together and perform well? Brian will share what biologists, psychologists, business strategists and, more recently, tech firms, have been researching for many years, and how it can help our teams reach their full potential. [CPT]

Chris Tite_That Beer Guy

Event Streaming is a powerful software architecture pattern which when applied to enterprise systems can create flexible, decoupled systems. Often when working with Legacy Systems we are not afforded the opportunity to leverage flexible design patterns and the latest technology to extend our architectures. This is Chris' story of how his team leveraged obscure technology in SQL to provide a stream of data events which were pushed into event streaming technologies like Kafka and Event Store, helping create a decoupled enterprise system. [CPT]+[JHB]

MEET OUR SPEAKERS

Clifford de Wit_CTO Dexterity Digital

Home automation used to be accessible to only the wealthy few who were prepared to spend a lot of money on custom hardware and software, that was expensive to configure and maintain, and not very user-friendly. In this talk, Clifford will cover the end-to-end story of how to build a smart home with hardware that is affordable and available for normal people, and powered by software that is all open or free. [CPT]+[JHB]

Cobus Bernard_AWS Senior Technical Evangelist for Sub-Saharan Africa

How do you approach the chicken and egg situation when creating a new cloud environment? Should you build fully-installed machine images or provision machines as they boot up? How should you be automating config / secrets? Do you even need config management and container orchestration? How do you scale out your developers' time by automating as much as possible, without them feeling out of control? Join Cobus and take a deep look at the components that make up your cloud environment and different ways to automate them using Terraform. [CPT]+[JHB]

Daniel Amber_Software Dev at cars.co.za

Most of us have worked on or maintained a legacy codebase. The temptation to rewrite can be strong. At cars.co.za Daniel and his team are currently working on a rewrite of their core product, one of SA's top 20 most visited sites. They have looked at issues with their current codebase that should change but have also noticed good architecture and design decisions that they'd like to keep. In this talk, Daniel will discuss the decisions that were made to get to this point, and how his team predicts it will benefit them in the future.
[JHB]

Darko Mesaroš_Senior Developer Advocate @ AWS

Moving to serverless brings more benefits if you can optimise the way you work. In this session, Darko will share best practices on different areas, from infrastructure management to deployments, distributed architectures and the role of teams, focusing on people and processes that are at the core of software development. To support these findings, Darko will review customer case studies to see what they did, why, and which benefits were derived most.
[CPT]+[JHB]

MEET OUR SPEAKERS

Edmore Moyo_Software Developer at Allan Gray (Pty) Ltd

Is "concurrency" just a buzzword? Is it real? Do you currently build concurrent software? If not, what would it take to start? During this talk, Edmore will provide an overview of what concurrency is, and what it is not. Looking at Scala, Go and Rust, you'll get to explore interesting concurrency models with examples, and find out how concurrency can make programs more efficient, and how understanding concurrency can be a vital skill for programmers going forward. [JHB]

Ferdi Redelinghuys_Co-Founder & CTO of Vula Mobile

From Ferdi's intense learnings gained while managing 100+ developers as VP Of Engineering at Takealot, to his current role of managing a high impact technology stack and team, while still enjoying life, he has picked up a few tools that could save you many hours and help keep you sane. [CPT]+[JHB]

Gerard de Jong_Played Doom too much growing up, now it shows! Never let him plug anything into your computer.

"It runs Doom!" has become a subculture of people getting Doom to run on anything. Gerard is going to show you what made the original source code so special and how it might just be possible to run Doom on the radiation hardened PowerPC heart of the Mars Curiosity Rover! This talk brings the hardware and software that make satellites and martian rovers work together, with the clever hacks and programming genius that made Doom so ahead of its time. It will outline how you can apply these lessons to give your own software development a truly universal edge. [CPT]+[JHB]

Jacques Blom_Senior Front-End Developer - Names & Faces

People love TypeScript for its safety and developer experience. People love React for its functional approach to building UIs. And people love GraphQL for its predictability and client-side control. In this session, we'll be exploring these technologies, and how they can be combined into a solid tech stack that offers scalability both in terms of application features and team size, as well as how they compare to alternatives on the market. [CPT]+[JHB]

MEET OUR SPEAKERS

Jade Abbott_Machine Learning Engineer at Retro Rabbit

As developers, we have a checklist of tasks required to ship and maintain a system in production. When Jade first started building machine learning infrastructure, few people had ever deployed these systems. Being the only ML-oriented person on her team, Jade was tasked with the entire pipeline, discovering quickly that machine learning adds a WHOLE BUNCH of unexpected things to the "take it to production" checklist. This talk will take you on a journey to give you a more realistic view of the struggles of deploying machine learning models. [JHB]

Jaen Swart_Principal Architect Red Hat

The ability to integrate APIs from multiple sources is critical to success. New approaches to enterprise integration, backed by flexible, cloud-ready technologies, are necessary. To integrate all the pieces of your organisation, you need an approach and technology, that is built for the long term. In this session, Jaen will talk about how to flexibly, incrementally and scalably integrate your apps, APIs, data, and devices with open interfaces and no lock-in — so you can create, experiment, and deliver new services quickly.
[CPT]+[JHB]

Jamie Hewland_Backend Engineer, Aruba (HP Enterprise)

How do you know where the bottlenecks are in your service and how do you measure your improvements? As systems become more distributed and heterogenous it becomes increasingly difficult to answer questions about performance, reliability, and ultimately, end-user experience. This talk is aimed at developers who are getting started with instrumenting and monitoring their services within a microservices architecture running on common public cloud platforms. [CPT]

Joshua Lewis_CTO & Interview Engineer

There are many opinions about doing production deploys on Fridays, most of them negative. Yet it happens regularly where Joshua works, even initiated from a phone while leaving the office for the weekend! Yes, deploying on a Friday sounds daunting and can be risky. It can also be liberating and, almost ironically, less stressful. What's not to like about delivering value more frequently? In this talk, Joshua will introduce you to the systems and protocols his team has put in place to enable deployments on Fridays...and any other day they like! [CPT]+[JHB]

MEET OUR SPEAKERS

Justin Slack_Head of Design and Front-End at NML

Layout on the web has always been very difficult because of a lack of real tools to accomplish this task. All manner of techniques from tables to floats, positioning, and display properties have been used in an attempt to emulate designs and create usable interfaces for the browser. This talk will trace the history of web layouts and demonstrate some of the new techniques at our disposal to create modern, designed interfaces with our new layout tools. [CPT]+[JHB]

Lizette Spangenberg_Senior UX/UI Designer @DVTsoftware, PhD Candidate, Violinist, Tea-Drinker

Machine learning influences many different industries and disciplines, and has opened the door to many new possibilities. One of the fields that is often overlooked in the application of machine learning is user experience (UX) design. Machine learning is already helping designers in many different ways – new tools, new possibilities for experiences – and can be applied in so many more ways going forward. All of this will be discussed in this talk, with practical UX examples to boot. [CPT]+[JHB]

Lorraine Steyn_Simplifier-In-Chief

Systems thinking is the macro behaviour that we must understand in analysing our world. A system always produces what it is designed to do, even if that isn't at all what we meant it to do! Systems are self-maintaining, and contain balancing and/or reinforcing feedback loops. The best feedback loops are short and frequent, but that doesn't always mean that we should react to short-term information! In this talk, Lorraine will explain how Systems work, what happens when they fail, and show you how Systems are all around us. [CPT]+[JHB]

Lukonde Mwila_Entelect, Intermediate Software Engineer

Development teams must consider the quantity of data, the complexity of data, the speed at which it is changing, and the most cost-effective ways of querying it. The integral role that data plays in an application, along with the challenges it brings to the table, make it data-driven. In this talk, Lukonde will share his experience working with DynamoDB and how it is a good fit for data-driven applications. He'll be highlighting the following main characteristics of DynamoDB: serverless, NoSQL, speed, flexibility, fault tolerance and security. [CPT]+[JHB]

MEET OUR SPEAKERS

Lusen Mendel_Director of Developer Relations at Karat

Interviews connect talent to opportunity. Yet, while there are billions of interviews happening every year, interviewing hasn't been recognised as its own discipline. As a result, many interviewing processes are unfair to candidates, tax developer teams' productivity, and fail to predict hiring outcomes.

In this presentation, Lusen Mendel will share their journey from leading software engineering teams to making Interview Engineering their job, including insights and best practices from the 60,000+ interviews Karat has conducted. [JHB]

Mark Heckler_Sultan of Spring

One fully open-source solution is widely used and respected to secure distributed systems & assets: Spring Security. Built with Java & Spring, it provides a proven app security platform that integrates with numerous languages and components to provide end-to-end security for your critical systems. This session is a live-coding "lock it down" exploration of how to secure your apps and assets now and maintain their security over time using 100% open-source software.
[CPT]

Matt Cavanagh_Game Developer, Rare

What is the key ingredient missing for the rise up of our robot overlords? Yes, giving them the ability to tattoo us weak humans. During this talk, Matt will take you through the design process of building a robotic henna tattoo machine, while learning bits of coding, electronics, 3D modelling, and the usual dose of pain and suffering we've come to expect from Matt's famous inventions.
[CPT]+[JHB]

Matt Cole_CIO, OUTsurance

In the modern world, a large part of companies' success is their ability to leverage technology. To be effective companies need to be able to build high performing dev teams, make use of modern tooling and tech stacks, and align their organisation around moving quickly to get working software in front of users. This talk explores how one of the biggest financial service companies in SA manages to ship working software multiple times a day and make use of modern cloud platforms and container-based tooling to move fast without breaking things. [JHB]

MEET OUR SPEAKERS

Michael Johnson_Business Intelligence Consultant

It is often said that when all you have is a hammer, everything looks like a nail. The same can be said of databases such as relational databases which, while great at solving some problems create challenges in others. During this session, you will be introduced to graph databases that model objects as nodes and the relationship between these nodes as edges. As a practical demonstration of this, data from IMDB will be used to calculate the Bacon Number of your favourite actors and actresses. [CPT]+[JHB]

Mike Geyser_Warning: Prone to Hyperbole!

Performance is a feature. It is arguably the most important feature of modern web experiences, but at times it can be a dark art. Complex build tools, confusing profilers and an abundance of metrics make it seem like one has to be a true web wizard to understand it all. It shouldn't be hard and luckily isn't - provided you use the right tools. Built directly into Chrome, the Lighthouse audit reports drive away from the darkness and shine a spotlight on the opportunities available to you, making it easy to improve. This talk will provide a detailed walkthrough of optimising performance using the Lighthouse audit report. [CPT]

Natasha Anderson_Standard Bank Engineering Practice Lead

IT organisations invest heavily in modernising engineering practices, the challenge we face is the ability to translate perceived value into quantitative metrics. How do we show that we are in fact improving? Join Natasha as she shares their approach to tracking and visualizing devops value. [JHB]

Natu Lauchande_Principal Data Engineer

Machine Learning is a very hyped topic at the moment. While a lot of the talks and presentations cover the data science component, very few cover the nitty gritty details of a ML pipeline. This talk will focus on the engineering part of Machine Learning by covering different ML systems architecture best practices and strategies including design. The entirety of the cycle of training, deployment, monitoring, champion/challenger testing, and serving layer will be addressed.

[CPT]+[JHB]

MEET OUR SPEAKERS

Nthabiseng Mashiane_Junior Developer, Absa

Induction is often the first official point of interaction a new joiner has with an organisation. This process gives the first impression and impacts factors such as performance and length of stay in the organisation. Join Nthabiseng as she share ideas and tips on how new developers can be inducted and integrated into new teams as efficiently as possible and, how we can cultivate a comfortable space that is conducive to their growth and ensures optimal performance as quickly as possible. [CPT]+[JHB]

Paul Zietsman_Technical Lead at Synthesis

This talk is about how we set out to build an analytics platform for one division and ended up serving an entire organisation. Paul will share why one data lake to rule them all is probably a bad idea, the lessons his team has learned along the way, things they will do again, and things to avoid. He'll also share how they utilised AWS, to go full serverless and ended up with a very low touch platform, digging into the services used, some of the caveats, some of the awesomeness and what the solution did to their credit card!

[CPT]

Pieter van der Merwe_Development Manager at cars.co.za

Hiring in the current South African landscape is a challenge. As the newly minted Development Manager at cars.co.za, Pieter has interviewed close to one hundred developers over a couple of intense months, moving through several iterations of their interview process to streamline it. This talk will cover the hiring lessons learned during this time. [CPT]+[JHB]

Rachel Appel_Developer Advocate at JetBrains

In this session, you'll learn many ways that accessible design benefits everyone, not just those with accessible needs. Adding accessibility features into your software opens your software to a 20% increase in market reach while making the experience better for everyone. Listen and learn how to prepare content, as well as design and code using the techniques that enable those with visual, auditory, motor, or cognitive impairments so those millions of people can now use your apps effectively. [CPT]+[JHB]

MEET OUR SPEAKERS

Renette Ros_Software Engineer

Kotlin is a cross-platform, statically typed language developed by Jetbrains. With concise syntax, null safety and full interoperability with existing java and android libraries it is sometimes considered a 'better java'. In this talk, Renette will share how she and her team used Kotlin multi-platform to get the game engine for the 2019 Entelect Challenge running, both on the JVM and in a web browser.

[CPT]+[JHB]

Ronica Singh_Software Developer moonlighting as an Indie Game Developer. Passionate about teaching as a Tech Trainer in Game and Web dev

Robotic Process Automation is the process of automating business operations using robots in order to reduce human intervention. This talk offers a quick intro to RPA, the what and the why; use cases in South Africa, including, how RPA is being taught in South African schools. Ronica will combine the theory with a demonstration of the use of RPA in game development. [CPT]+[JHB]

Russel Povey_Front-End Developer

Humans are flawed; we're operating with a 3-pound jelly-like computing system, that is very prone to certain kinds of errors. Computers cannot creatively and intelligently reason the way that we do - their strength lies in their reliability at executing tasks without fail. When writing code, we are tasked with the responsibility of not only instructing these machines, but we're also required to communicate with our fellow humans. In this talk, Russel shows how you can use the declarative style that functional programming offers to achieve this. [CPT]+[JHB]

Troy Mcnamara_Nedbank, Senior Development Manager

There are so many tools out there in the DevOps universe which can confuse us mere mortals. There is a bucket that stores a bunch of bits, a butler guy that builds code, Sonar that scans code, a downwind sail to deploy code and a bunch of vegetables that enable us to test code. Choosing the right tools that get you to production painlessly is key. During this talk, Troy will guide you towards knowing what kind of automation will be most valuable to you.

[CPT]

MEET OUR SPEAKERS

Tshepang Lekhonkhobe_Software Developer

If ever you were curious about how compilers work, this talk is for you. It will walk you through a sequence of steps where source code gets turned into executable form (machine code). Snippets of output from each major step will be shown. This will be accompanied by Tshepang explaining various compiler workings, including examples such as the borrow checker, a component that ensures (compile-time) memory safety. [CPT]+[JHB]

Vanessa Raath_Head Cheerleader @ The Talent Hunter

It is not good enough for IT Professionals to rely solely on their reputations anymore. If you want to stand out from your peers, you need to be building a strong online presence. Going forward, the people with an excellent personal brand will be the ones who are handpicked for the best jobs. During this talk, Vanessa will offer advice for companies and individuals to ensure that they stand out in the South African IT industry. [CPT]+[JHB]

Veronica Schmitt_Biohacker, Breaker-of Medical-Things, Bionic Woman, Forensicator and Hungry for Knowledge

This talk will focus on the definitions of Software of Bills and how this approach can aid in the secure code development with a focus on Medical Devices. This talk will focus on work that has been done with the FDA and I am the Cavalry, shining a light on the collective need for secure development of code by ensuring there is transparency in the way it is distributed. Bridging the gap between manufacturer, physician and patient, this talk will highlight how transparency can ensure secure code development. [CPT]+[JHB]

Clive Sagadevan_Cloud Technical Professional

Clive joined IBM as a graduate in 2008 where he spent 5 years in the consulting business division , fulfilling roles such as technical consultant , business consultant, development lead and solution architect.

This is where he found his passion for DevOps and lead the practice for many large projects. He then moved to the software division where he is still helping customers with their multi-hybrid cloud journey focusing on Multicloud management and micro-service architecture. [JHB]

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Create_Scan_Erase

remote work; the new normal

By Pamela Hill

In Gartner's last quarterly update on global workforce trends, they identified the top three reasons for an individual to take a new job as compensation, work-life balance and stability in the workplace. In a similar 2019 study conducted by Buffer on the 'State of Remote Work' 40% of the respondents said their biggest reason for working remotely was flexibility largely relating to the afore-mentioned work-life balance.

In fact the desire to work remotely has become so important to many knowledge workers, that Zapier.com published a study at the end of 2019, in which 74% of the respondents said they would quit their existing position for one that offered a remote opportunity.

What's your biggest struggle with working remotely?

- **22%** Unplugging after work
- **19%** Loneliness
- **17%** Collaborating and/or communication
- **10%** Distractions at home
- **8%** Being in a different timezone than teammates
- **8%** Staying motivated
- **7%** Taking vacation time
- **4%** Other
- **3%** Finding reliable wifi

State of Remote Report / 2019
buffer.com/state-of-remote-2019

In a country where we already struggle for highly skilled, highly qualified individuals with experience we can expect to see more employers adopting some form of remote, or remote-office-hybrid options so that they can retain their skilled people who may otherwise leave.

Over the last ten years in the US there has been a 115% increase in remote work. One of the concerns has always been that working from home is less productive but in a study done by Stanford University it was shown that remote workers were actually about 13% more productive than their office-bound colleagues. The reasons are myriad, and run the gamut from a less noisy environment being conducive to better focus and therefore better quality, to being flexible which allows people to work hardest when they are at their most productive. The same study also illustrated a decrease in sick leave taken by remote workers – good news for any HR manager.

So what does this mean for South Africa?

We have unique challenges in SA relating to electricity, limited bandwidth and corporate cultures that are not necessarily supportive of high trust – which is a basic requirement for allowing your team to work remotely. The statistics aren't available. If a company doesn't already have a strategy or an HR policy on working remotely they are going to lose valuable staff members that are costly to replace, and incredibly hard to find. So organisations need to start putting the technology and infrastructure in place that will support this mode of work. That strategy will need to include ways in which a remote worker can be involved in the team (Slack channels, teams, fishbowl video links, etc), how workers can manage the constraints around working from home (generators for loadshedding for example, or backup internet links) and even the changes that will need to be made to corporate security policies on devices to accommodate this change.

Pamela Hill, DevConf speaker, Android Engineer and Tech Lead at Luno has recently shifted from a full time to a remote worker, and this is her story.

Remote work: Yay 👍 or nay 👎 ? A personal story

It was 2018, and I hated my job - but not for the reasons you may think. I was working for a big insurance company on their first mobile app, and the tech stack was new and sparkly.

Kotlin had become the most fashionable language for the Android platform, virtually overnight, and I was eager to learn something new after years of hacking Java code. The Android platform had become more elegant since my introduction to it in 2012. So, the actual work was not the problem. I had lovely colleagues too. So what was the cause of my dissatisfaction?

I hated my job, largely due to the commute. There's no good way to spend almost an hour and a half each day trapped in a car on a highway filled with other harried workers. Additionally I had come to hate the office as well. After years of relative privacy in a team cubicle, the company had decided to make absolutely everything, as far as the eye could see, open-plan. As the noise levels increased my ability to focus decreased and I could almost feel my productivity plummeting. The strain of the long commute and my rapidly declining personal productivity had become unbearable, and I started looking for another position.

The opportunity to become a remote worker came as a surprise, but in retrospect, it was a godsend. Slowly, I felt the stress of traffic and 'interruption burnout' dissipate, and my mood soared. However, adjusting to remote work took a little time. For example, it takes exponentially longer to get to know your teammates to a degree of mutual comfort and trust when you work remotely. I had to overcome my fear of asking too many questions and together, my team and I had to solve technology foibles like how to work around load-shedding and dialling-in to noisy standup areas. We had to figure out how to make sure that I'm included in technical discussions and fun team activities. However, after a year of being remote, I am confident that I will never become office-bound again.

In my session, "Remote work: Succeeding as a team", I will again touch on my journey to becoming a remote worker. However, my focus will be on how to ensure that you and your team can collaborate effectively when part of your team is remote. I will also address long-distance leadership. My goal is to inspire and equip you to succeed as a (remote) team. Become part of the discussion - say hi, or tweet at me @pamelaahill using the tag #devconfzaremote.

```
<script type='text/javascript'>
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      const JOB_TITLES = ['developer', 'tester', 'architect'];
      const SKILLS = ['golang', 'scala', 'react', 'python', 'javascript'];
      const PASSION = 'changing_the_world_with_cool_tech';
      const PREFERRED_TECH_STACK = ['kubernetes', 'docker', 'gitlab', 'linux'];
      const WORK_ENVIRONMENT = ['coffee', 'free_lunches', 'gym', 'flexi_hours',
     'innovative_tech', 'smart_people'];
      if ((_.includes(JOB_TITLES, visitor.job_title)) &&
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          (_.intersection(PREFERRED_TECH_STACK,
           visitor.preferred_tech_stack).length > 0) &&
          (_.intersection(WORK_ENVIRONMENT, visitor.work_env).length > 0) &&
          visitor.passion == PASSION) {
            window.location.href = "https://www.allangray.co.za/careers" ;
      }
  }
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```

Don’t stay in your lane

By Howard Feldman,
Head of Synthesis Marketing & People

The term “Stay in your lane” became popular in 2018. According to the Merriam-Webster Dictionary, although it had been used prior, it rose to prominence when the National Rifle Association criticised emergency room doctors for their comments on America’s crisis in gun violence, telling them to stay in their lane. They did this in a tweet that implied that their remarks on gun control did not fall under the doctors’ umbrella of expertise.

The doctors responded by showing examples of people hurt by gun violence. They used the hashtag #ThisIsOurLane.

What a waste of time and energy.

To tell someone to “stay in their lane” is to send a message that they are not valued. It de-motivates, it crushes creativity and it stifles success.

The path of man has been altered and improved by those who refused to stay in their lanes, from Galileo to Elon Musk, from Rosa Parks to Hedy Lamarr; it is the mavericks who through their courage, foresight and optimism refused to swim where they were told to.

Lanes do not exist at Synthesis. The culture of barriers stands counter to the Synthesis approach where hierarchies and divisions are viewed as unnecessary limitations.

The now famous saying that “Culture eats strategy for breakfast” is lived each day with the company’s staggering growth rate and blue chip clientele

proof that is in the pudding.

To be part of the Synthesis team, one has to be “Hungry, Humble and Smart”. There has to be a belief that learning is ongoing and that each day needs to bring you a small step closer to personal and professional goals. As part of the ethos of the company, each member of the team is allocated a career advocate and a personal mentor. Team members continue learning, and with a focus on growth, the individual is valued. Courage is lauded and everyone knows that at Synthesis, “We say **‘YES’** to crazy ideas.”

Innovation cannot be realised where limits are placed on those with aspirations. Having the courage to succeed is as important as having the courage to fail. And at Synthesis, both are celebrated, and both are viewed as learning opportunities.

At Synthesis, it is not that the team is expected to swim outside their lanes. It’s that there simply are none.

Say YES to crazy ideas...

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Disrupt
/dɪsˈrʌpt/
To disrupt is to disturb, to disturb is to unsettle, to unsettle is to dislodge, to dislodge is to challenge, to challenge is to reshape, to reshape is to play, to play is to create, to create is to invent, to invent is to innovate, to innovate is to succeed.

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synthesis

Tabs or Spaces? Emacs or Vim? Deploy on Fridays?

By Joshua Lewis

Hardly a week goes by without someone tweeting about these flame war-thy topics. Of course, there are endless replies, explaining why the OP can't possibly be correct - regardless of the original position. How can opinions be so different across the industry?

Where we often miss each other, though, is that we don't talk about how we arrived at these opinions. What is the context in which we formed that opinion? Would we change it if the context changed? What competing principles and trade-offs did we consider in forming it? The truth is, it's more interesting – and valuable – to look at the process we've used to arrive at an opinion, than solely considering the opinion itself.

When it comes to deploying on Fridays, and most other important decisions, there are several useful questions we could ask:

Is this something we want to (be able to) do? What competitive advantage will it give us?

Could we get some of the benefit without 'going all the way'?

If it's something we'd like to move towards, what's currently standing in our way?

How can we safely experiment towards our goal?

How will we know when we've achieved enough of the benefit and are starting to reach diminishing returns?

What flags could we use to indicate that we're in a hole, and should stop digging ?

We've experimented and iterated our way to deploying on Fridays. We've made mistakes along the way and recovered from them. This capability gives us many benefits. But here's the kicker: deploying on Fridays isn't actually our goal; it's not a useful outcome in and of itself. (Just like 'being Agile,' but that's another story altogether .)

What we'd really like:

A robust, repeatable, fast way of deploying our software.

The confidence to deploy our software whenever we want.

Fast feedback loops to let us know when we've made a mistake.

The ability to recover when we do make a mistake.

These things are useful because they enable forgood to experiment rapidly and safely, and to 'turn on a dime for a dime' .

Our successes – and failures – in deploying on Fridays provide valuable feedback on whether we're achieving this outcome or not.

https://en.wikipedia.org/wiki/Law_of_holes

https://joshilewis.wordpress.com/2017/09/20/thats-not-agile/

www.forgood.co.za

https://www.infoq.com/articles/large-scale-scrum-interview-larman/

DEVCONF JOURNEY

2016 JHB

Date: 8 March
Venue: Riversands Incubation Hub
Number of attendees: 472

2017 JHB

Date: 9 March
Venue: Vodacom World Events Centre
Number of attendees: 766

2018 JHB

Date: 27 March
Venue: Birchwood
Number of attendees: 735

2018 CPT

Date: 29 March
Venue: River Club
Number of attendees: 294

2019 JHB

Date: 28 March
Venue: Vodacom World Events Centre
Number of attendees: 757

2019 CPT

Date: 26 March
Venue: River Club
Number of attendees: 324

THE BURNOUT BURNDOWN

by Anjuan Simmons

The software industry is filled with ideas on ways to better deliver features to end users. There are development methodologies including Scrum, Kanban, XP, TDD, DDD and a host of various approaches to building and deploying software to users.

However, there are few conversations around how the ways in which we deliver software can burn out the people responsible for creating those features. We have to remember that, at least for now, we need humans to develop software. As long as that's true, we should consider the human cost of our development life cycles. In addition, the software development field has intrinsic evergreen stressors. There's the continuous feeling of being left behind since frameworks, tools, and technologies change so often as well as the fact that most software development teams labour under deadlines that they don't necessarily understand while still being accountable to meet.

Last year, the World Health Organization (WHO) reclassified burnout as an "occupational phenomenon" and described three dimensions:

"feelings of energy depletion or exhaustion"
(i.e., the feeling that you have nothing left to give)

"increased mental distance from one's job, or feelings of negativism or cynicism related to one's job"
(i.e., growing dissatisfaction with your job)

"Reduced professional efficacy"
(i.e., reduced satisfaction with even your own accomplishments)

Software developers who don't have the tools to manage the stress in their professional and personal lives will eventually spiral into burnout and begin exhibiting all three of these dimensions. This results in the corporate costs of missed deadlines, reduced quality, and workplace conflict. However, there are also the personal costs of sickness, hospitalisation, and, in extreme cases, death.

Organisations that invest in building burnout resistant teams will see a return on that investment in terms of reliable shipping schedules and an increased ability to respond to production instances. More importantly, they will have a workforce that is happier and more productive.

My wife, Dr. Aneika Simmons, and I have seen countless people experience burnout in both her realm of academia and my career in the technology industry. We've also faced burnout to various degrees in our personal life. We created a three-part framework for improving your burnout resistance.

The first part is removing personal barriers and building viable human relationships.

The second part is getting rid of the things that drain your attention and harnessing the power of focus.

The third part is recognizing your unhealthy habits and developing practices that improve your overall health.

Healthy teams build healthy code, and our talk at DevConf South Africa is a deep dive into the literature about burnout and a full exploration of our framework. I hope you come to the session, but, if you can't make it, you can purchase my primer on burnout called The Burnout Resistance Manual (available here: https://anjuansimmons.com/talks/managing-the-burnout-burndown/)

The Effects of Employee Burnout

Employees who say they very often or always experience burnout at work are:

63% more likely to take a sick day

Half as likely to discuss how to approach performance goals with their manager

23% more likely to vists the emergency room

2.6 times as likely to leave their current employer

13% less confident in their performance

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DEVELOPER USER GROUPS

Name	Description	Frequency	Url to Group
OxCoffee	Informal infosec meetup where 1 or 2 talks are shared from the community regarding tools and techniques	Monthly (first Sat of each month)	bit.ly/2VgLKHD
Oxcon	Oxcon is an infosec conference aimed towards building the Gauteng and ZA community	Yearly (late Oct, early Nov)	bit.ly/32eWaZv
AWS Jozi	It's an Amazon Web Services meetup - we discuss topics related to Amazon Web Services	Monthly (month end)	bit.ly/38TfA96
BSIDES Cape Town	BSides Cape Town is an annual Information / Security volunteer organised event	Yearly (December)	bit.ly/3709Yva
Cape Town Front-end Developers	Cape Town-based web developers and designers passionate about the technologies we work with daily	Monthly (1st Wed of each month)	bit.ly/3bV2ytj
Cape Town MS Developer User Group (@CPTMSDUG)	Topics are anything development related that touch on Microsoft technologies somewhere	Monthly (2nd last Wed of each month)	bit.ly/2V9bm93
Cape Town Scrum User Group (SUGSA)	This group is for anyone interested in Agile software development	Monthly (last Thurs of the month)	bit.ly/2VaQSN6
CMX Connect Cape Town	A meetup for community builders to connect, grow and learn together	Yearly (mid April)	bit.ly/2HGdCfZ
Developer User Group - Cape Town	Technology and vendor-neutral community group that shares and learns on a variety of software development topics.	Monthly (4th Mon of each month)	bit.ly/3bWmMmz
Developer User Group - Johannesburg		Monthly (2nd Tues of each month)	bit.ly/3bWmMmz
Developer User Group - Pretoria		Monthly (3rd Wed of each month)	bit.ly/3bWmMmz

DEVELOPER USER GROUPS

Name	Description	Frequency	Url to Group
DDD Cape Town	InDDDaba - Design Driven Domain Cape Town	Yearly (mid April)	bit.ly/2SMMimU
Drupal	To learn and collaborate on Drupal, a powerful Content Management platform designed for a multi-device world	Monthly	bit.ly/2Vc6Mqs
FEDSA	Registered non-profit organisation supporting the advancement of front-end development in SA	Monthly (1st Wed of each month)	bit.ly/2Va6joN
Garden Routers	Semi-regular meetups in Plett/Knysna for developers	Monthly	bit.ly/38IwuXI
Gauteng Python User Group(GPUG)	People interested in the Python programming language. Alternating between Code Kata and talk-driven meetups	Monthly (3rd or 4th week of each month)	bit.ly/2HEZTGx
GDG Cape Town	Google Developer Groups are for developers who are interested in Google's developer technology	Monthly	bit.ly/2PdBbB2
GDG Johannesburg	Google Developer Groups are for developers who are interested in Google's developer technology	Monthly (1st Wed of each month)	bit.ly/2HJ2saE
Johannesburg Clojure Meetup	Oxcon is an infosec meeting aimed towards building the Gauteng and ZA community	Monthly (1st Tues of each month)	bit.ly/32dSQhn
OWASP Cape Town	Meetup for anyone interested in Web Applications, Web Application, Linux, Computer and information security	Every 2/3 months	bit.ly/2wAEnQV
Pretoria AWS Meetup	Community driven monthly meetup to discuss various aspects and services of Amazon Web Services	Monthly	bit.ly/37Psvay
Scrum User Group Johannesburg - SUGSA	This group is for anyone interested in Agile software development	Monthly (2nd Wed of each month)	bit.ly/2SMIxOM

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