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## Top Skills

Mobile Applications  
Ruby on Rails  
Ionic Framework

# Dale Zak

Senior mobile developer that was building and designing mobile apps, before mobile apps were cool.

Saskatoon, Saskatchewan, Canada

## Summary

Veteran software developer with over 15 years of experience building and designing mobile and web apps.

I began developing mobile apps back in 2003 when the first generation of smartphones were just being released, long before iOS or Android even existed.

Since then I've helped corporate clients, nonprofit organizations and UN agencies develop mobile apps to gather data, engage their community or empower citizens using mobile technology.

The same mobile design principles I learned in those early days like utilizing limited screen space and handling unreliable connections still apply even more today, and continue to help me build world class mobile applications.

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## Experience

Ushahidi

Mobile Developer

November 2016 - September 2019 (2 years 11 months)

Mobile development lead at Ushahidi including building two mobile apps using the Ionic Framework.

The first app was Ushahidi Mobile, crowdsourcing app that allowed adding multiple mapping deployments, gathering and viewing reports offline, capturing photos and videos, multilingual support as well as whitelabel functionality. The platform has been used for disaster response, citizen journalism, election monitor, advocacy and human rights.

The second app was TenFour, emergency checkin system for teams that allows you to broadcast questions to teammates and gather back responses

across multiple channels like sms, web, email or mobile. Initially for iOS and Android, I later refactored to allow the same code to be deployed as a PWA to replace our legacy Angular1 frontend.

## ReliefWeb

### Mobile Developer

April 2016 - October 2016 (7 months)

Developed the ReliefWeb Crisis app to aggregate data from across multiple UN agencies like UNOCHA and FTS so the information is easy to browse on your mobile device.

The app was designed to efficiently access API endpoints from different sources, storing the data locally so it was available on the device offline.

## OneStory Inc

### Co-Founder & CTO

January 2013 - August 2016 (3 years 8 months)

Saskatoon

Co-founder and CTO which included managing daily operations, pitching to investors, architecting backend infrastructure and leading the technical development of the product.

OneStory was a video storytelling platform that provided a guided interview process which automatically stitched together individual video clips into a beautiful mini documentary aiming to inspire others.

I built the backend web app and API on Ruby on Rails, Postgres for a database, Amazon S3 for storage, Amazon Cloudfront for caching, and Bootstrap for layouts. The app was deployed to Heroku taking advantage of dynos for background tasks like sending emails and asynchronously processing videos.

The video stitcher was quite complex developed using FFMPEG for resizing and converting incoming videos, adding opening and finishing credits and stitching everything auto-magically together into web viewable formats.

I also developed the native iOS and Android apps, which allowed capturing individual video clips offline, and uploading them once an internet connection became available. The app offered robust retry logic to help ensure the videos were uploaded even on slow internet connections.

Video is never an easy task, so was proud to have overcome several difficult technical challenges while building the platform.

## Whitespace

### Co-Founder & Coordinator

September 2011 - August 2016 (5 years)

A nonprofit organization that aimed to use technology to help empower disadvantaged groups in the community.

Helped coordinate a number of local initiatives like Repurposed Labs which repurposed used computers into public internet terminals, YXE Voices a platform to gather ideas from citizens on important local issues, and YXE Votes a website to help inform voters on the upcoming civic election.

## Apps4Good

### Co-Founder & Organizer

August 2008 - December 2015 (7 years 5 months)

Founded the organization to coordinate weekend hackathons to harness the talent and passion of software developers to give back to their community by building mobile apps.

The original strategy was to build mobile apps we can sell, and then donate the proceeds to local charities. We later shifted our focus to building free apps that could help solve local problems.

Besides the weekend hackathons being really fun, it also brought together people from different backgrounds, building friendships, forming alliances and gaining valuable skills.

## World Bank Group

### Mobile Developer

January 2015 - June 2015 (6 months)

Developed Android app used in the Philippines to gather surveys on the condition of school facilities being rebuilt following the typhoon.

I joined the project late after the previous team had failed to build and deliver a working app. In under two months I built the native Android app from scratch, allowing offline collection of complex surveys including gathering photos, which could later be uploaded when an internet connection became available.

There was a number of technical hurdles that I needed to be overcome, like working with a less than ideal data structure, allowing offline support, development of complex skip and branching logic, and handling the different form field data types.

## United Nations OCHA

2 months

### Mobile Developer

February 2015 - March 2015 (2 months)

Published the INSARAG Guidelines app as whitelabeled version of Humanitarian Kiosk utilizing the same code base with a custom theme to match INSARAG's own style and branding.

Users would select which folders they wanted to download making the content available offline. Similar to Humanitarian Kiosk, the app had no-backend server instead consumed its data from Dropbox so the data could easily be maintainable by the INSARAG team.

### Mobile Developer

February 2015 - March 2015 (2 months)

The United Nations Assessment and Coordination (UNDAC) application provides the user with the Field Handbook and useful documents for expert deployments into response and preparedness missions in natural disasters.

The application allows the user to select the chapters which are automatically downloaded and synchronized to their mobile device. Once downloaded, they will be able to access the files while being offline.

The app was another whitelabeled version of the Humanitarian Kiosk, using Dropbox as the backend so the application content could easily be managed without the cost of maintaining a server.

## Ushahidi

### Mobile Developer

July 2010 - July 2013 (3 years 1 month)

Nairobi, Kenya

Designed and developed iOS app for Ushahidi's mapping platform that allows adding multiple deployments, gather reports offline and browse reports on the map.

The app also offered custom sharing functionality which was not currently available for iOS, multilingual support for over a dozen languages, and whitelabel functionality so it be rebranded and published as a standalone app pointing to a single deployment.

#### ReliefWeb

Software Consultant

December 2012 - March 2013 (4 months)

Designed and spec'ed a mobile app to allow humanitarian workers to checkin to a disaster.

The app provided realtime contact lists which is a serious problem during a crisis because physical contact lists quickly become out of date. The concept later evolved to become the <https://humanitarian.id> system.

#### United Nations OCHA

Software Consultant

November 2011 - August 2012 (10 months)

Designed and developed Humanitarian Kiosk for UNOCHA, iOS app that provides a range of up-to-the-minute humanitarian related information from emergencies around the world.

The app required no server instead used Dropbox as a backend. Each UNOCHA country office was given access to their own Dropbox folder where they would drop latest documents, images, videos, maps and infographics. The app allowed users to subscribe to each of those country folders like Sudan, Pakistan, etc making the content available offline.

#### Global Viral Forecasting Initiative

Mobile Developer

October 2010 - April 2012 (1 year 7 months)

Developed Android app for collection of sample and survey data for virus information to replace existing paper form collection.

The app allowed data collection for complex forms with required fields, skip logic and offline collection.

#### MindSea Development Inc.

Mobile Developer

June 2010 - November 2010 (6 months)

Halifax, Nova Scotia

Member of the MindSea development team building iPad and iPhone apps for clients, helping implement a number of features for different iOS projects using Objective-C and Xcode.

### FrontlineSMS

Software Developer

August 2010 - September 2010 (2 months)

Developed a plugin for FrontlineSMS application using Thinlet and Hibernate frameworks to allow offline mapping and submission of incident reports to Ushahidi's mapping platform.

The plugin allowed incoming SMS to be stored locally on the laptop, and uploaded to Ushahidi once an internet connection became available.

### FrontlineSMS:Medic

Software Developer

July 2010 - August 2010 (2 months)

Developed the TextForms plugin for FrontlineSMS application using Thinlet and Hibernate frameworks which allowed gathered structured form data entirely via SMS.

The plugin also provided submission validation prompting the user if an invalid response was provided and guiding the user through each survey question until all answers were received.

### Extraordinaries

Mobile Developer

January 2009 - March 2010 (1 year 3 months)

San Francisco, California

Developed the iOS app for the micro-volunteer platform that allowed user's to complete micro-tasks like translation and image checking all on their mobile device.

I worked remotely for the San Francisco team while living in Halifax, which included using XCode, Objective-C, iPhone SDK, PHP and Zend Framework.

### RTI International

Mobile Developer

September 2009 - January 2010 (5 months)

Added additional features and functionality to the Ushahidi's mobile app including improved mapping capabilities so it could be deployed in El Salvador to gather crime information.

The app previously did not have the ability to pan and zoom on the map, instead only offered a static map image of the report. So with a lot of complex calculations I implemented custom ability to scroll the map, which was pretty remarkable considering nothing like that was current available on the Windows Mobile platform.

### Ushahidi

Mobile Developer

January 2009 - December 2009 (1 year)

Nairobi, Kenya

Developed Windows Mobile application for Ushahidi to allow gathering of incident reports in a disconnected state and upload once the internet becomes available.

The app allowed viewing of existing reports, creating and uploading reports, capturing photos and detecting the user's location.

### Metaworks

Mobile Developer

March 2009 - August 2009 (6 months)

Halifax, Nova Scotia

Developing Windows Mobile application for Metaworks' Mantis data collection and reporting system using Visual Studio 2008, C# and Compact Framework 3.5.

Highlights included building a flexible ORM framework for mapping database attributes to model class properties, and having the app run on a wide range of screen sizes and device capabilities.

### VendAsta Technologies Inc.

Mobile Developer

February 2008 - November 2008 (10 months)

Saskatoon, Saskatchewan

Part of the VendAsta team that developed a disconnected mobile inspection system for Ritchie Bros, using Microsoft .NET 3.5, C#, WPF, LINQ, XML and Windows Mobile 6.

I worked remotely on the project while living in London England, and visited the office when back in Saskatoon.

### Pitney Bowes

Software Developer

July 2007 - February 2008 (8 months)

Developed VB.NET/ASP.NET portal web application for Pitney Bowes which interfaced with serial port to read weight scale data and generation of Code128 barcodes.

Project required both working remotely and traveling to New Jersey for meetings, and developing software that interacted with physical hardware devices.

### Dexterra

Software Developer

February 2007 - April 2007 (3 months)

Bothel, Washington

ASP.NET developer helping improve map routing functionality for Dexterra dispatching software using Visual Studio, C#, Ajax and Javascript.

The project required both remote work and traveling to Bothel Washington for meetings with the onsite team.

### Point2 Technologies

Software Developer

January 2003 - December 2006 (4 years)

Saskatoon, Saskatchewan

Software developer and project manager coordinating team of four developers to architect, design and test disconnected multi-lingual mobile application using Visual Studio, XML, C#, .NET Compact Framework 2, Windows Mobile 5 and Oracle Lite.

The CCIPDA mobile app helped Caterpillar Inc migrate from paper forms to a mobile inspection system, allowing inspectors to complete surveys while in the field and upload them upon returning to the office.



This was during the early days of smartphone devices so was pretty revolutionary at the time.

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## Education

University of Saskatchewan

Honours Degree, Computer Science Software Engineering · (1998 - 2003)