

ALEJANDRO E. CRUZ PAZ

PERSONAL INFORMATION

Born in Mexico City, 14 January 1987

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SUMMARY

I am a software engineer with experience developing web and mobile applications with a keen eye on UI design and interaction. I am very interested in social impact entrepreneurship, and passionate about building software that can help mitigate social problems in the areas of: urban mobility and citizen engagement. Several years of experience on writing software products on the following programming languages: Java, Objective-C, TCL/TK, Python, Ruby, and Javascript. I use the following frameworks and tools on applications I have developed: Ruby on Rails, Play, iOS, Android, Xcode, DerbyJS, Backbone.js, Mapbox, Mixpanel Metrics, ReactJS, AngularJS and Ionic Framework.

WORK EXPERIENCE

- February
2020–Present

Senior iOS Engineer — Amsterdam

Backbase

As part of the Research and Development team within the Business department I have had the chance to work on the following:

Adding new features and maintenance of existing ones which provide core functionality (journey) for payments creation and management for the end users of our customers (financial institutions and banks). Helped with the release of SDKs for our journeys and their networking clients.

Discussed and worked on ideas and PoC's towards concrete improvements on the release process of our SDKs. Was in charge of the transition to XCFrameworks using Fastlane, and supported fellow colleagues with the migration to Bitrise CI.

Was involved on the introduction of the *use case* abstraction into our journey's architecture. This allowed us to separate the logic provided by the networking clients from the app and view's logic. Besides releasing the SDKs for networking clients and journeys now also had to do the same for use cases.

Have owned since the beginning of its existence one of the most complex journeys we provide for our customers. This is a highly configurable journey that ships UI components that the user can arrange and customise individually and that allows the end user to easily create any kind of payment.
- July
January
2020

Senior iOS Engineer — Berlin

Mobimeo

I was part of the iOS navigation team at Mobimeo, whose mission is to develop a wayfinding framework ready to integrate into mobility apps. During the time I worked there I was the developer assigned to the implementation of Route Subscriptions: a feature for keeping the user informed of any change on a selected public transport route. Besides the usual UIKit-related work for building views, I worked a lot with displaying geographic data on MapKit and other cartography frameworks such as Google Maps and Mapbox, as well as modelling data flow using RxSwift: from the network layer up to the view layer.

July 2017– iOS Engineer — Paris
Jun 2019

The Trainline

I was part of a big iOS team of 20 developers splitted between two offices: Paris and London. I have worked on different aspects of the European and UK app: enabling new carries such as Flixbus coaches, preparing the apps for iOS 11 and iPhone X and working on the convergence of both apps towards one single app by updating API endpoints and getting rid of legacy code both in Swift and Objective-C. Have also worked on implementing complex fare requirements with client-side and server-side business logic.

Due to the complexity of the new single app, we have structured the codebase in frameworks that are managed using Carthage. Additionally to this, the usual day-to-day tasks include code reviews, writing unit tests for new or existing features, bug fixing, implementing AB testing toggles via Leanplum and enabling analytics to be able to measure the experiments the Data Science team runs.

September
2016–May iOS Engineer — Amsterdam
2017

Favoroute

I was on charge of the development of Favoroute's iOS app. Worked on the implementation of new features and on the improvement of existing ones. Specifically, I designed and implemented, together with our backend developer, the new connections that are required for our web and mobile clients, wrote the code in the iOS app that make use of these connections, implemented pixel-perfect UI/UIX features on the app based on wireframes the designer created, and traced bugs as soon as they were detected, as well as improved the app performance whenever there was opportunity to do so. It was also amongst my duties sending TestFlight versions to the internal testers on the team so they could review the app and prepare it for upload to the AppStore.

July 2015– Fullstack Developer — Amsterdam
August
2016

Favoroute

At Favoroute I worked as lead of the web front-end interface development using tools such as Ruby on Rails, ReactJS, Bower, Capistrano, Rspec and Jenkins. This web application needed to be also responsive, so I also worked on the CSS and HTML elements to make sure it is optimal in the context of mobile usage. I designed together with the CEO the new features for the web product as well as the features for the mobile products and then I sit with the backend developer for designing the required API endpoints for those new features. I also took time to review the UI/UIX on the generated products.

May–Dec iOS Engineer — Mexico City
2015

Voolta

Developed the backend and mobile application for Voolta; a proof of concept of a story-telling app for displaying cycling and walking tours within a city. Built using Ruby on Rails, PostgreSQL/PostGIS on the backend and iOS on the mobile frontend.

On this app I put a lot of effort in the UI/UIX: On one side 1) the app fetches content in the background as it goes displaying guide information for the user, 2) built a considerable number of custom UIViews which needed to be very flexible depending on the enabled contents (defined in the backend per guide) and 3) the design and art on the app; from icons and background decorative elements displayed on each venue in the guide. It also required extra work due it's offline mode capabilities: when the first app is launched it fetches all of the assets available for the guides together with the guide information. Upon any change, the app will always update the updated assets.

June 2014– FullStack Developer — Graz
May 2015

*BikeCityGuide
Apps GmbH*

Worked on a responsive web application that allows cyclists to plan their

cycling route for trips on the city or in the countryside. I received this project when it was starting to be ported from Symphony and bare jQuery to Ruby on Rails and AngularJS. Together with a colleague, we worked on it for a couple of months and then I was the developer on-charge for the project. Worked together with the other team members on designing new features and then making wireframes on the new features (UI/UX). I worked on implementing acceptance tests using RSpec integrated with Jenkins at deployment time.

Amongst the most complex tasks I had to implement for this job was to connect input events between the different components of the web interface (the map, the input fields, address bar) and had to also consider aspects such as the geocoding of the address the user provided by text and it's corresponding aggregation of markers to the map or the reverse geocoded address retrieved by placement of markers on the map by the user itself.

For this project, I used jQuery, AngularJS, Leaflet, Ruby, Ruby on Rails, PostgreSQL, Nominatum, OpenStreetMaps, PostGIS, Adobe Photoshop, Adobe Illustrator and Invision.

This application runs at <http://map.bikecitizens.net>

*Feb–May
2014*

FullStack Developer — Mexico City

ITDP Mexico

Developed a web application that allows decision makers and the ITDP organisation to visualise the current and planned public transport network of Mexico City together with socio-demographic information on the population within the reach of the public transport stations. I worked with members of the organization on designing the information architecture of the web application according to what the organisation needed to communicate, right after I worked on UI/UX and design of the web application. Was also on charge of adjusting, improving and finally integrating the **SHAPE** files given by the organization into the web application backend.

For this project, I used jQuery, Leaflet, Ruby, Ruby on Rails, PostgreSQL, PostGIS, QGIS, Adobe Photoshop and Adobe Illustrator. I also used some tools for reducing the complexity of the geographic elements within each one of the layers of the SHAPE file.

You can see a video showcase of this application here

https://www.youtube.com/watch?v=HIYY_s3d.ZY

*Nov 2012–Jan
2014*

CEO & CTO — Mexico City

Wikicleta

Worked as the CEO and CTO at Wikicleta, developing the backend infrastructure, the frontend for the web application, and the mobile native versions of the app for iOS (using Objective-C) and Android (Java). I worked as well on the UX design and the business model of this app.

The app is still published on the AppStore, but the server has been taken down. In the past, it reached 80k registered users and 8k daily users. For this startup, I used jQuery, Ruby, Ruby on Rails, PostgreSQL, PostGIS, iOS and Android development libraries, Adobe Photoshop and Adobe Illustrator.

*May–October
2013*

Android Engineer — Mexico City

Ecobici

Developed the official Ecobici native app for Mexico City for the Android platform which was published from around 2012 until 2014. Ecobici is the public bike sharing system on Mexico City, the app then, allowed users to find bicycle stations where they could deploy or take a bicycle to empower their everyday commute. It was used by more than 100,000 users per week. It supported Android 2.3 up to Android 4.4. This app is no longer published on the Google Play Store.

July 2012–
May 2013 iOS Engineer — Mexico City

Comunicación
Constructiva

Together with a friend, we developed a platform for mobile interactive surveys on iOS (on the iPad). We built a backend service on which we were able to define a survey consisting of a set of questions and valid answers per each question and it's ordering on the survey. On the mobile frontend we loaded the JSON generated by the backend and presented the question according to a predefined UI theme. Such themes supported 2D scenes rendered on UIKit, cocos2D and 3D using the Nineveh 3D library.

It was a real challenge to achieve the mobile application to switch smoothly between rendering scenes (2D and 3D).

You can see a video showcase of this application here

<https://youtu.be/tqxqkETsmhU>

Jan 2012–Feb
2013 Software Engineer — Mexico City

IIMAS-Instituto
de Investigaciones
en Matemáticas
Aplicadas y
Sistemas (UNAM)

Designed the architecture, choosed the technologies the project was going to use, did all the implementation: backend application using Scala (first using Lift framework and then switched to Play framework), web frontend built using Ruby on Rails and native mobile clients for iOS and Android.

2011-1 &
2013-2 Frontend Developer — Mexico City

Discoteca Online

I worked for this company as a contractor, the project was under my development and continuous maintenance.

Developed and extended content management system for allowing Discoteca Online to keep updated their public courses offering using Ruby On Rails. Also worked on the development of a Javascript / jQuery component that displays the offers when mounted on any webpage using a typical JS embed system which makes JSONP/JSON calls.

March 2010–
Jan 2012 Junior Software Engineer — Mexico City

iEvolutioned

Worked remotely for two of their clients project: a CMS for Pemex and a real state platform. Both projects required basic frontend work on HTML/CSS and backend work on Ruby and MySQL.

Jan–April
2009 Stack Developer/Tester — Sevilla (Remote)

BitRock

I was on charge of mantaining self-contained installers for server-side applications and environments such as Alfresco, Ruby on Rails, LAMP, Drupal, Redmine. The self-contained infraestructure was written on TCL/TK and XML. I used Bash as well for creating scripts for commonly used tasks.

Nov 2007–
June 2009 Junior Software Engineer — Mexico City

Global Contact

Developed a CRM for the call-center which allowed them to track their clients campaign using Ruby On Rails with MySQL as database.

EDUCATION

2004-2008 Universidad Nacional Autónoma de México

Computer Science

Avg 8.3 · School: Facultad de Ciencias

Thesis: *Proposal of an Information System for public transport*

Description: This thesis described the design and architecture of a system capable of providing routing directions for a public transport user considering one or many changes in mode of transport within a connected network and considering the availability of real-time data. It also discussed some of the modern technologies (languages, frameworks and database systems) that could be used to implement such a system.

Advisors: Prof. Luz GASCA & Assoc. Prof. Elisa Viso

SOFTWARE DEVELOPMENT SKILLS

<i>Mobile Application Development</i>	iOS, SWIFT, OBJECTIVE-C, COCOAPODS, ANDROID, IONIC FRAMEWORK, REACT NATIVE, CORDOVA
<i>Web Development</i>	RUBY, RUBY ON RAILS, JAVASCRIPT, APACHE, REACTJS, ANGULAR, HTML, CSS, SASSL, BOWER, RSpec
<i>Databases</i>	POSTGRESQL, MONGODB, MYSQL, SQLITE
<i>Others</i>	ADOBE PHOTOSHOP, ADOBE ILLUSTRATOR, INVISION, SKETCH

OTHER INFORMATION

<i>Programming</i>	2008 · ACM International Collegiate Programming Competition 2008 · Google Summer of Code 2010 · Arduino course with David Cuartielles 2017 · HackTrain: Winner of the Customer Experience track
<i>Entrepreneurship</i>	2009 · Incubadora de empresas de la UNAM 2012 · Startup Weekend MX for the planet winner 2013 · Velocity 2013 2013 · Transformadora Ciel 2013 · Venture Institute Acceleration programe startup
<i>Communication Skills</i>	2011 · Lecture at IIMAS-UNAM (About the Pumabus real-time platform) 2013 · Lecture at Centro de Cultura Digital on iOS Development 2014 · Pitch at Wayra by Telefonica
<i>Languages</i>	SPANISH · Mothertongue ENGLISH · Fluent FRENCH · Intermediate DUTCH · Elementary
<i>Interests</i>	Trains · History · Running · Kayaking · Cycling · Entrepreneurship · Activism

June 8, 2022