



# Carlos Cruz

Hi! I'm Carlos Cruz, a front-end web engineer with a curiosity for back-end implementations and SaaS. I enjoy building data visualizations and modern platforms tools for commercial, scientific, and research purposes, and I have worked in diverse data-driven industries, from IoT to Healthcare.

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## Work

### TriNetX - Web and Software Engineer

1/2019 - present

#### Responsibilities

- Develop web based solutions for healthcare research platform using JS technologies
- Communication with product and design team.
- Create D3js charts visualizations who work within ReactJS

#### Achievements

- Worked in improve the quality of the user interface implementing complex patters for ReactJS and D3js
- Successfully migrate UI layout from CSS-modules to styled-components

### Volteo LLC/Intel - Principal Front End Engineer

1/2016 - 1/2019

#### Responsibilities

- Develop web based dashboards for Internet of Things (IoT) integrations consuming data from API and WebSockets services
- Worked with the design team to improve the prototype and development process using open-source libraries
- Prototype and develop D3js visualizations in ServiceNow service portal and ui-pages
- Create a Storybook for reusable react components including their own css styles

#### Achievements

- Create multiple visualization dashboards for diverse clients including Intel, Netflix and Arizona University
- Integrate D3js with Service now ui-pages
- Collaborate with the design team in the creation of an improved design and development workflow
- Created a NPM library of charts and visualizations to use in IoT dashboards

## Prodigious Latin America - Senior Front End Engineer

6/2015 - 12/2015

### Responsibilities

- Develop web applications for Kraft and Sanofi in conjunction with back end and design teams
- Migrate existing web sites from angular to reactjs

### Achievements

- Mentor PST Team in modern javascript technologies as React, D3js and webpack

## 3VOT - Web and Salesforce Developer

7/2014 - 6/2015

### Responsibilities

- Prototype and develop web applications using clay-cli, backbonejs and react
- Manage AWS services (S3, Route 53 and EC2 instances) for sandbox and production environments
- Improve the development of Salesforce Visualforce pages with open-source front end libraries

### Achievements

- Creation of CLI tool to develop web applications inside Visualforce pages
- Improve the production and sandbox environments in AWS
- Collaboration with a startup team to develop web-based products

## Rodco S.A. - Web and Salesforce Developer

1/2013 - 6/2015

### Responsibilities

- Integrate technology on multiple enterprise processes using Salesforce and third party applications
- Website maintenance
- Support to the marketing unit

### Achievements

- Successfully develop multiple application in different business sections like deliveries, point of sale and sales reports, among others
- Game develop for marketing unit
- Improvement of transactional emails in house and for clients

## Software Consultant

1/2018 - present

As Consultant I worked with multiple clients in different fields, like real estate and point of sale, developing and deploying web based solutions using open source technologies. With these projects I increased my skills working with back end technologies like Express, Node JS and Docker. And have also gained experience in Dev-Ops configuring AWS services.

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## Education

### Universidad Cenfotec - Software Engineer

2017 - ongoing

### Universidad Latina de Costa Rica - Software Engineer

(unfinished) 2014 - 2015

## Projects

### VizGVar

Bioinformatic Data Visualization tool developed using d3.js and native JavaScript. This is an ongoing personal project that aims to create new insights for researchers in the field of protein/DNA variations. My role as a software architect and chose which software technologies use according to the needs of tool

#### Responsibilities

- My role as a Full Stack developer, includes developing the client side of the application, defining a software development process and choosing the appropriate technologies for implementation

#### Achievements

- Successfully developed a visualization tool that consumes data from the widely used Ensembl API
- Published an article in Oxford Bioinformatics about the application and its features

### NX4

Web-based visualization tool for the exploration of large datasets of viral sequences. This is an open-source project maintained by a small group of web-developers, visualization researchers and computational scientists

#### Responsibilities

- Assume the role of web developer, including Dev-Ops, helping with the visualization tool and creating a development and deployed process and environments

#### Achievements

- Published an article in Oxford Bioinformatics about the application and its features

## Publications and talks

### Oxford Bioinformatics – author

2017

Visualization portal for genetic variation (VizGVar): a tool for interactive visualization of SNPs and somatic mutations in exons, genes and protein domains. Antonio Solano-Román, Verónica Alfaro-Arias, Carlos Cruz-Castillo, Allan Orozco-Solano - <http://dx.doi.org/10.1093/bioinformatics/btx694>

### Oxford Bioinformatics – author

2019

NX4: a web-based visualization of large multiple sequence alignments. <https://doi.org/10.1093/bioinformatics/btz457>

### World Usability Day Costa Rica – presenter

2015

VizPort: Transformando Datos en Conocimiento (VizPort: Turning Data into Knowledge)

### Cenfotec University – presenter

2015

Innovation en la visualización de datos científicos (Innovation in the visualization of scientific data)

## Skills

