Ariel **Rodríguez**

Heredia, Heredia, Mercedes Norte, Residencial El Pino, house number 12E

(+506) 8699-55-25 | ✉ arieli13.10@gmail.com | ⌂ (+506) 22383479 | ⍟ arieli13 | in arieli13

Edu**cation**

Instituto Tecnológico de Costa Rica	*Cartago, Costa Rica*
Bachelor in computer science. Average GPA 83.1 (over 100)	*Feb. 2014 - July 2018*

Universidad Nacional de Costa Rica CEIC (Centro de Estudios del Inglés Conversacional)	*Heredia, Costa Rica*
Conversational english courses	*2009 - 2011*

Wor**k Experience**

Neural network that classify numbers and images (Python and TensorFlow) — *TEC Cartago, Costa Rica*

I used a previously modeled neural network and trained it to classify numbers and other one to classify images of numbers handwritten

2017

- I trained and tested a neural network to solve the problems i have mentioned

Local alignment of DNA sequences (C programming language) — *TEC Cartago, Costa Rica*

Two DNA sequences were loaded from two txt files, and the program used an algorithm to align the sequences of DNA and output the similarity between them.

2017

- I implemented the Local alignment of DNA sequences's algorithm, using dynamic programming

BigData analysis using Hadoop (Java) — *TEC Cartago, Costa Rica*

Using the information provided by the San Francisco's database about crimes, mapped and reduced the data using Hadoop and than made conclusions using the information generated

2016

- I used Hadoop to map and reduce the information of the crimes in San Francisco

Segmentation and cell counting from digital images (Java) — *TEC Cartago, Costa Rica*

Segmentation and cell counting from digital images taken from a fluorescence-based microscope, to glioblastioma tissues (cancerous brain tissues)

2017

- I implemented the Kittler's algorithm, necessary for the segmentation of the images
- I implemented an image's histogram equalizer
- The images were uploaded to a web page and than send to a Java Application using Tomcat
- I used OpenCV to handle the images

Labyrinth (C programming language) — *TEC Cartago, Costa Rica*

A labyrinth were loaded from a txt file and the program walked to all the possible outlets using threads (C programming language)

2017

- I used the library pthreads (Linux/Ubuntu) to handle the threads of the program
- I used mutex semaphores to handle the synchronization
- I used backtracking to solve the labyrinth

Checkers game (Python and C++) — *Cartago, Costa Rica*

Checkers game, the computer could play vs an human

2016

- I created an international checkers game
- I implemented the NegaMax algorithm to let the computer play against itself or an human

ViajeTEC: Project of Instituto Tecnológico de Costa Rica (React Native) — *TEC Cartago, Costa Rica*

VijeTEC is an app (for Android and IOS) that helps students and employees of TEC to do carpooling

2017

- Two students and I, are creating an app using React Native to help the students and employees of TEC to do carpooling
- The app is not available because it's not yet finished. But it's almost done

Failover cluster SqlSever, MongoDB and Cassandra DB — *TEC Cartago, Costa Rica*

A student and I, made a failover cluster for Sql Server, MongoDB and Cassandra

2016

- We made a failover cluster for SQL Server using virtual box and Windows Server
- We made a failover cluster for MongoDB and Cassandra DB using Docker

ACM-ICPC (International Collegiate Programming Contest)

Alajuela, Costa Rica

Competitor

2015 and 2016

Tutoring

Teacher assistant

Cartago, Costa Rica

Assistant of the course: Architecture of computers (Students of 1st year)

Feb. 2017 - June 2017

Technical skills

Python, C, C++, C sharp, Java, SQL, GNU Octave, Assembly language, Arduino, JavaScript, PHP, HTML5, CSS3

React Native, NodeJS, Hadoop, OpenCV, Bootstrap, GITHUB, GITLAB

SQL Server, MySQL, Oracle

Languages

Advanced English

Spanish, native language

Extracurricular Activity

Universidad Nacional de Costa Rica

Heredia, Costa Rica

CISCO IT Essentials and CCNA 1

Sep. 2015 - March 2016

ANAHE (Asociación Natación de Heredia)

Heredia, Costa Rica

Swimmer

2013

Swimming team of Instituto Tecnológico de Costa Rica

Cartago, Costa Rica

Swimmer

Feb. 2014 - Present

- Swimmer, JUNCOS 2015 (Costa Rican University Games)
- Swimmer, JUNCOS 2017 (Costa Rican University Games), bronze medal 400 mts free style (7 swimmers)
- Swimmer, UCR tournament 2017, silver medal 4x50 free style relay (3 universities)
- Open sea events: Herradura (6th place over 50 swimmers), Hermosa (64th place over 200 swimmers approx), Golfo Dulce (silver medal) and Punta Leona (6th place over 25 swimmers); 1500 mts free style

UNO Sports

Heredia, Costa Rica

Seller

December, 2013

Personal Interests

Math, machine learning, programming, data analysis, swimming, playing soccer, hangout with friends and family