# Vicente Alberto Cortés Puschel

# Electrical Engineer/Computer Vision

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Electrical Engineer graduated from Universidad de Chile with the highest distinction. Subspecialized in both Data Science and Communications/Signal Processing, having applied it in both the Indoor Positioning Systems industry and the food industry for image classification.

I consider myself to be someone with high level of both hard and soft skills, a very quick learner, and a person who can fit in any kind of environment. I've managed high impact projects in Arara, Kwali, and Banco de Chile, both for their Data Science and Telecommunications teams.

#### COMPETENCES

Programming languages Python, Java (JEE, JSE), Matlab, C++, Assembler

Advanced Knowledge Deep Learning, Image Processing, Data Filtering, Big Data, SLAM, AWS (S3, EC2, SageMaker)

**Information presentation tools** Suite MS Office, **ETEX** 

Others MySQL, Git, CAD, Eagle, LTSpice

## Professional Experience

# December 2021

# March 2021

#### Data Scientist, Kwali, Santiago, Chile

Development/Research of Deep Learning models in the context of computer vision for food classification

- > Use of AWS (S3, EC2, SageMaker) tools for training Deep Learning models
- > Use of SoTA (Transformers and DenseNet) models for image classification
- > Memory/Time optimization of Deep Learning models for better performance on edge devices
- > Construction of the inference pipeline via acyclic graphs

Python AWS SageMaker EC2 S3 Git

#### December 2020 January 2019

# Data Scientist, ARARA, Santiago, Chile

Development of a Pedestrian Dead Reckoning model for sensor fusion with a WiFi based model for Indoor Localization

- > Python development of the Deep Learning/Quaternion based model
- > Development of an Android application for recording Wi-Fi fingerprints
- > Sales management of the aforementioned product in retail

Python Java EKF Android Git Assembler Native

#### March 2018 January 2018

#### Internship consultant in the Telecommunications area, BANCO DE CHILE, Santiago, Chile

- > Use of Python for automating Cisco switches' configuration
- > Quick Wins for OSI layers 2 and 3 in the bank
- > Skype for Business implementation for bank employees

Cisco Python Telnet

# LANGUAGES

- > Spanish: Native language
- > English: Full professional proficiency

## CORE SKILLS

- > Great soft skills
- > Autonomy for making decisions
- > Able to create a good working environment
- > Extremely quick learner

# **EDUCATION**

2013-2020	Electrical Engineering, Universidad de Chile. Graduated with the highest honours. Facultad de Ciencias
	Físicas y Matemáticas

2008-2011 Instituto Chileno Británico de cultura. TOEFL ITP Certificate.

2007-2012 Instituto Nacional General José Miguel Carrera

#### HIGH IMPACT PROJECTS

#### IPIN 2019 COMPETITION (Indoor Positioning and Indoor Navigation)

2019

Development of a Pedestrian Dead Reckoning based system for the participation of the IPIN 2019 competition, obtaining 4th place out of 18 in our category.

Python Java Android

### FREDI (FORESTANDO Y RECREANDO CON DIVERSIÓN E INNOVACIÓN)

2018

2017

Creation of a support system for the rehabilitation of patients of the elderly care home Fundación Nuestra Esperanza.

Arduino C# Eagle

AQUATIC RF MOBILE DEVICE

Research and development of a RF aquatic vessel. Used for sensing heavy metals in the lakes of the south of Chile. The vessel was later used by the División General de Aguas (DGA)

Arduino C# Eagle

#### ADAPTIVE CONTROL FOR MOTORS

2017

Research and design of a fractional derivative-based control system applied in DC motors for Universidad de Chile.

Matlab

# EXTRACURRICULAR ACTIVITIES

- Assistant in the Robotics Laboratory of the University of Chile for the development and improvement of natural language processing systems for the Pepper robot.
- 2016-2019 Assistant at Universidad de Chile, teaching classes and reviewing controls for specialty courses.
  - 2016 Assistant at the Voice Processing Laboratory of the Universidad de Chile, in charge of programming NAO robots. In charge of Python programming for flotation process studies in mining industries.
  - 2016 Member of the IEEE student branch of the Universidad of Chile.

#### REFERENCES

#### Tomás Lungenstrass Poulsen

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#### Jorge Ríos

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