Sebastian Cepeda

MSc electrical engineering with more than 4 years of full-time experience in Software development, Machine learning and Computer Vision

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EXPERIENCE

Consorcio, Chile: Senior data scientist

March 2020-PRESENT

Consorcio is a financial services company in banking and insurance

- Demand forecast/recommender system of the products to the clients using neural networks in tensorflow inside the AWS ecosystem.
- Automation of processes involved in marketing campaigns, using Python libraries (pandas, numpy, etc.) and sql, inside AWS.

Cencosud, Chile: Data scientist

Dec 2018-Feb 2020

Cencosud is a multinational retail company in Latin America.

- Sales forecast for retail logistics, using machine learning models in Python(NN, GBM, linear regression, lasso, clustering) with Pandas, Matplotlib, Numpy, scikit-learn.
- Scaling to big data with Dask and PySpark in azure databricks.
- Detection of pedestrian and tracking, measuring the flow of people in physical shops in python using CNN in TensorFlow (YOLO), Kalman filter, OpenCV.
- Setting up Azure devops git code repository, testing/continuous integration, code coverage, documentation.

WoodtechMS, Chile: Software development engineer

Apr 2015 – Dec 2018

Woodtech does measurement in industrial applications, like material intake (wood, mineral rocks) in Europe and America.

- Development of hardware simulations and drivers in Java.
- Use of LIDAR to measure wood and minerals, using models (linear algebra/geometry, etc.) in C++.
- Use of Kalman filter to smooth GPS readings.
- Research of stereo vision and 3D reconstruction from images (SfM, MVG) and development using C++, OpenCV and PCL.
- Modelling of electromagnetic absorption using Octave.
- Mentoring development of models (Kalman filter, regressions)
- CI using Jenkins (testing), git/svn for code repository.
- Development for linux and Windows.

SKILLS

● Computer vision {CNN, SfM, Stereo Vision, OpenCV, PointCloudLibrary, LIDAR, 3D point cloud processing/segmentation}

● Machine learning {TensorFlow, Keras, Pandas, scikit-learn, Dask, Spark, azure databricks, DNN, LSTM, time series forecasting}

● Software development {Java, C/C++, Python, MySQL, docker, cmake}

EDUCATION

University of Chile, Chile: *MSc electrical engineering (GPA 3.7/4.0)*

2014-2016

Master's thesis focused on segmenting of blood vessels in images of the eye's fundus for detection of diabetic retinopathy, using computer vision.

University of Chile, Chile: *Minor computer science (GPA 3.3/4.0)*

2011-2013

University of Chile, Chile: *BSc electrical engineering (GPA 3.3/4.0)*

2008-2016

LANGUAGES

● Spanish: Native language.

● English: Fluent (reading, writing, speaking)

- Management of interns during their projects.
- Ownership of the software for a product, from development to production (access control in industrial settings):
    - Design and development of algorithms in C++ for data processing.
    - GUI development in Java.
    - Configuration of the system (MySQL, scripts) and sensors (cameras, LIDAR, etc.)
    - Development of installers and deployment in production.

WoodtechMS, Chile: Internship/Freelancer

Apr 2013-Feb 2014

Development of algorithms in C++ for wood measurement, using segmentation of 3D point clouds.

Sixbell, Chile: Internship

Jan 2013 – Feb 2013

Development of an Interactive Voice Response app in Java for Android.

PROJECTS

Biomedical engineering lab, University of Chile

Mar 2014 – Dec 2015

MSc Thesis: Blood vessels segmentation in retinal images (http://repositorio.uchile.cl/handle/2250/138129).

AMTC Robotics lab, University of Chile

May 2011 – Oct 2011

Testing the C++ software of the autonomous car project of the lab.