Camilo **Valenzuela**

COMPUTER SCIENCE · MACHINE LEARNING

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An enthusiast for astro-engineering and technologies to help solve today's problems. Searching for new challenges.

Education

Universidad Técnica Federico Santa Maria — *Valparaiso, Chile*

MASTER'S IN COMPUTER SCIENCE AND ENGINEERING. — *Mar. 2017 - PRESENT*

- Expected graduation on March 2019

COMPUTER SCIENCE AND ENGINEERING. — *Mar. 2011 - May. 2018*

- Undergraduate thesis title: "Application of Recurrent Neural Networks for power forecast in Chilean Wind Farms."
- 77 on GPA (on a 1-100 scale)

Skills

Programming Python, R, C/C++, Matlab, LaTeX **Languages** Spanish, English, German

Experience

European Southern Observatory (ESO) — *Antofagasta, Chile*

SOFTWARE INTERN — *Jan. 2017 - Mar. 2017*

- Working on Paranal Engineering Group's Technical Database to store 10 years of technical data.
- Testing several big data tools (Hadoop, Elasticsearch, Cassandra), Time Series Databases (OpenTSDB, KairosDB), Data Collectors (Logstash, Collectd) and Visualization Tools (Grafana, Kibana)
- Creating online dashboards to help the monitoring and futher analysis of the instrument behavior.

Centro Científico Tecnológico de Valparaiso (CCTVAL) — *Valparaiso, Chile*

RESEARCH ASSISTANT — *Jun. 2016 - Oct. 2016*

- Working with Phd. Student in Image Segmentation using Pixel Classification with SVM models, for Breast Cancer Cells Images.
- Writing scripts to automate the Machine Learning experiments.

Atacama Large Millimiter Array (ALMA) Observatory — *Santiago, Chile*

SOFTWARE INTERN — *Jan. 2016 - Feb. 2016*

- Integrating ALMA's Dataflow Monitoring System, using Nagios and Grafana.
- Creating a prototype to monitor and analyse ALMA's dataflow.

Chilean Virtual Observatory (ChiVO) — *Valparaiso, Chile*

DEVELOPER IN THE FONDEF D11|1060 PROJECT. — *Mar. 2013 - Apr. 2014*

- Establishing and developing the first step to create a Chilean Virtual Observatory.
- Evaluating existing technologies. Creating prototypes using No-Sql databases. Developing ChiVO Endpoint

Extracurricular Activities

Computer Science Research Group (CSRG) — *Valparaiso, Chile*

TECHNICAL LEADER — *2016 - 2017*

- Working on Astroinformatics projects.
- In charge of the management of the group, applied research, and training new members.

Active Programming Course *Valparaiso, Chile*

Teacher/Organizer *Jun. 2015 - Jul. 2015*

- Small Scratch programming course for 10 to 14 year old kids.After the course they can create simple games using basic programming skills.

Honors & Awards

2012-2015 **Honor List**, Award for students with academic excellence in UTFSM. *Valparaiso, Chile*

2014 **"Feria de Software" Award**, Best grades in Informatics Department Software Fair. *Santiago, Chile*

Courses

2015 **ALMA Common Software Workshop**, ALMA Observatory *Santiago, Chile.*

2017 **La Serena School of Data Science**, AURA Observatory *La Serena, Chile.*

Publications

Multi-horizon Scalable Wind Power Forecast System

Camilo Valenzuela, et al. IWAIPR 2018.

Towards Large-Scale RoI Indexing for Content-Aware Data Discovery

Mauricio Araya, et al. Astronomical Data Analysis Software and Systems (ADASS) 2017.

Docker - based Implementation for an Astronomical Data Analysis Cloud Service.

Matias Diaz, et al. Astronomical Data Analysis Software and Systems (ADASS) 2017.

Wrapping and Deploying Legacy Astronomical Code Into Python Environments.

Martín Villanueva, et al. Astronomical Data Analysis Software and Systems (ADASS) 2017.

Chilean Virtual Observatory services implementation for the ALMA public data.

Jonathan Antognini, et al. SPIE 2014.

Evaluating a NoSQL alternative for Chilean Virtual Observatory Services.

Jonathan Antognini, et al. Astronomical Data Analysis Software and Systems (ADASS) 2014.