Andreina Cota Vidaurre

Cochabamba, Bolivia

https://github.com/andreina-covi

@ andrecotavidaurre@gmail.com

www.linkedin.com/in/andre-cota-o12

Experience

2020-Present

ObjectProfile SpA.
Software development and Research
Supervisor: Alexandre Bergel, PhD
My main responsibilities include:

- Apply Machine Learning to infer type variables from dynamically typed language source code
- Apply Genetic Programming to automatically create method argument validators

2018-2020

Semantics S.R.L.
Software development and Research
Supervisor: Juan Pablo Sandoval, PhD
My main responsibilities include:

- Build an interpreter that resolves GraphQL queries in the Pharo programming Language
- Use Genetic Algorithms to automatically generate unit tests
- Propose a visualization tool to analyse the population evolution of Genetic Algorithms

2017 - 2018

PIL Andina S.A.
Software developer
My main responsibilities include:

- Develop and maintain a sales and distribution system, using Java and Spring
- Develop and maintain the sales and distribution system of mobile app, using Android
- Support for system users
- Prepare of reports based on database for different areas of the company

Education

2018	**Informatic Engineer**
	UMSS - Universidad Mayor de San Simon (5 years program)
	Ranking: First of the class

Bachelor Thesis

Title	**Anomaly Detection of Individuals Daily Routine**
Supervisor	PhD. Eduardo Di Santi
Description	The purpose of this system is to alert people who are in potential danger in a timely manner. For this purpose, the user's geolocation information, clock time, among other information that is collected through a mobile application. The collected data is pre-processed and passed to the unsupervised algorithm: K-Means, which identifies the routine patterns of users.

Research Project Participation

Title	**Drone-based Early Wildfire Detection**
Description	Project under of the direction Ph.D. Eduardo Di Santi. I was part of the "Software Factory" team, which was responsible to develop a drone-based system for detecting wildfires. In particular, I was responsible for developing a fire detection system through HOG (Histogram of Oriented Gradients) and SVM (Support Vector Machine).

Publications

2020	**TestEvoViz: Visual Introspection for Genetically-Based Test Coverage Evolution** Andreina Cota Vidaure, Evelyn Cusi Lopez, Juan Pablo Sandoval Alcocer, Alexandre Bergel. *Proceedings of 8th IEEE Working Conference on Software Visualization (VISSOFT '20).*
2018	**Deviation Testing: A Test Case Generation Technique for GraphQL APIs** Daniela Meneses Vargas, Alison Fernandez Blanco, Andreina Cota Vidaurre, Juan Pablo Sandoval Alcocer, Milton Mamani Torres, Alexandre Bergel, Stéphane Ducasse. *Proceedings of International Workshop on Smalltalk Technologies (IWST '18).*
2016	**Visual automatic fire detection through the Histogram of Oriented Gradients and Support Vector Machine** Andreina Cota, Evelyn Cusi, Carlos Escobar, Kevin Orellana, Patricia Rogriguez. *UMSA: Revista Investigación y Tecnología*

Skills

- Linear Regression, Logistic Regression, K-Means Clustering, Support Vector Machines, Neural Networks, NLP, Genetic Algorithm, Genetic Programming

- Relational (MySQL, SQLite) and NoSQL (MongoDB) Databases

- Python, Java, Pharo

- Pharo IDE, Roassal

- Pandas, Numpy, SciPy, Scikit-learn, Matplotlib, OpenCV, Jupyter, Django

- Linux (Ubuntu, Debian), Windows, MacOS

- Git, Octave, Latex

Additional Courses

2021 — **Machine Learning**
AI Saturdays La Paz

2020 — **Natural Language Processing**
Specialized Coursera program about NLP that includes four courses

2019 — **Introduction to Neural Networks, Genetic Algorithms, and NeuroEvolution**
Tutorial taken in Bolivian Summer School event, UCB (Universidad Catolica Boliviana), given by Ph.D. Alexandre Bergel

2019 — **Reinforcement Learning for Video Games**
Bolivian Summer School, UCB given by Ph.D. Julio Godoy

2019 — **Deep Learning**
A Specialized Coursera program that includes five courses

2016 — **Object Detection**
Coursera's course from Universitat Autonoma de Barcelona

Other

2014 — ICPC Bolivia
Participation in the International Collegiate Programming Contest - South America/South Regional

References

Prof. Dr. Alexandre Bergel
DCC, University of Chile, Chile
Email: abergel@dcc.uchile.cl
Website: https://www.bergel.eu

Prof. Dr. Juan Pablo Sandoval Alcocer

Pontificia Universidad Católica de Chile, Chile

Email: juanpablo.sandoval@ing.puc.cl

Website: https://jpsandoval.github.io

Languages

Spanish	Mothertongue
English	Conversational