Andrea Figueroa

Master in Science in Computer Engineering

Valparaíso, Chile
andrea.figueroa@usm.cl
andreafigue.github.io

Education

2016–2018 **Universidad Técnica Federico Santa María**, Valparaíso, Chile, Msc. in Computer Engineering.
Thesis: An adaptive Simulated Annealing for Large-Scale Robot Motion Planning

2010–2016 **Universidad Técnica Federico Santa María**, Valparaíso, Chile, Bsc. in Informatics Engineering.

Teaching

Professor

2018 **Data Visualization**, 2nd Semester, UTFSM.

2018 **Computer Programming**, 1st Semester, UTFSM.

Teaching Assistant

2018 **Data Visualization**, 1 semester, UTFSM.
Prof: Cecilia Aragon

2016-2017 **Artificial Intelligence**, 4 semesters, UTFSM.
Prof: María Cristina Riff

2012-2016 **Databases**, 8 semesters, UTFSM.
Prof: Cecilia Reyes

2011-2014 **LabComp**, 6 semesters, UTFSM.
Student-based Computer Lab

Languages

Spanish **Native**

English **Fluent**

Research

Jun 2018-ongoing **Text-prizm**, Advisor: Cecilia Aragon.
Qualitative coding is a labor-intensive process of manually reading and interpreting large amounts of data, many researchers use tools like Microsoft Excel or Google Spreadsheets for this task as most of the qualitative coding tools are not adapted to large online communication datasets, these tools can be effective but lack many useful features to make coding easier and more effective. Text-prizm is a web application for collaborative coding of large volumes of short text messages, its interface is built using a human-centered approach and aims to facilitate the qualitative coding and analysis of large online communication datasets.

Sept 2018-ongoing **Cultural Differences in Data Privacy Perspectives on Social Media**, Advisors: Cecilia Aragon, Claudia López.
The Cambridge Analytica scandal has triggered a discussion about data privacy in social media. Motivated by this context, we aim to answer this research question: Does the public online debate reveal different perspectives on data privacy across countries/cultures? A large-scale Twitter dataset around this issue with both English and Spanish tweets has been collected and we aim to analyze the data through both qualitative coding and automated analysis.

Oct 2017 to Nov 2018 **An Adaptive Simulated Annealing for Large-Scale Robot Motion Planning**, Advisor: María-Cristina Riff.
In this work a Simulated Annealing approach with adaptive mechanisms to find paths in large-scale scenarios of Robot Motion Planning is proposed, the main goal is to minimize the length of the path in different environments; completely known, semi-known or unknown. This approach can find short paths with low computational time in a variety of problems with different features and resolutions.

Skills

Coding C/C++, Python, Ruby, Bash, SQL, PHP.

IT Operations GNU/Linux, Nginx, MariaDB, PostgreSQL.

Design LaTeX, Adobe Photoshop, Gimp.

Software Development Ruby On Rails, CSS, HTML5, Jquery, Git.

Work Experience

Mar 2018 to Aug 2018 ***Freelance* Software Developer**, *Math Department at UTFSM*, Valparaíso.
Development of teaching assistant applications system

Apr 2017 to Jan 2018 ***Freelance* Software Developer**, *National Congress of Chile*, Valparaíso.
Development of software to verify interest and patrimony declarations of members of the Congress

Jan to Mar 2014 **Internship**, *Latam Airlines Group*, Santiago.
Development of difussion platform with indicators of performance of workers

Publications

2017 **Andrea Figueroa, Elizabeth Montero & María-Cristina Riff**, *"An effective Simulated Annealing for Robot Motion Planning"*, 29th IEEE International Conference on Tools with Artificial Intelligence (ICTAI).