

Education

M.Sc., Visualization
Texas A&M University, TX, USA.

May 2021 (Expected)



B.Sc., Computer Science
(Ingeniería Civil en Computación)
Pontificia Universidad Católica de Chile, Santiago, Chile.

September 2015



Exchange Student, Computer Science
The University of Texas at Austin, TX, USA.

Spring Semester 2013



Experience

Full Stack Developer
Papinotas, Santiago, Chile.

Mar - July 2018 (5 months)

- Web app used in schools developed in React and Ruby On Rails.



Software Engineer
Magnet SPA, Santiago, Chile.

Oct 2016 - Feb 2018 (1 year 5 months)

- One month developing an Android app for taking pictures and videos and uploading them to a server.
- Six months developing enterprise web apps using Python with Django.
- The rest of the time developing a web app using Python with Odoo ERP.

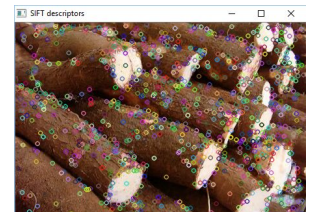


Research Scholar
Texas A&M University, TX, USA.
Department of Computer Science & Engineering.

Jan – Mar 2016 (2 months)

Advised by prof. Bruce Gooch (Ph.D. University of Utah),

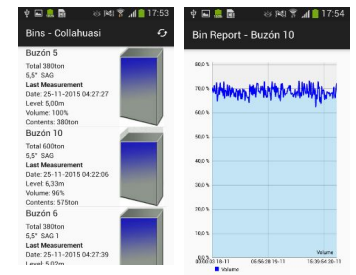
- Worked on Machine Learning apps for research in agriculture. For example, object recognition using images and NLP for voice commands. <http://aggiecv.blogspot.com>



Part Time Software Engineer
RSolver, Santiago, Chile.

Sep – Dec 2015 (3 months)

- Android development of enterprise apps, one for stock management and other for real time monitoring.
- Worked full-time from Monday to Wednesday.



Software Engineering Intern
Goplacit, Santiago, Chile.

Jan – Feb 2015 (2 months)

- Developed a Ruby On Rails app that generates reports about real estate using a large database with information from different countries in Latin America.



Skills

Programming Languages, APIs and Frameworks:

- Advanced: Python
- Intermediate: Javascript, Ruby on Rails, HTML, SQL, C++, Java, Android, C#, MATLAB, OpenGL, OpenCV.
- Previous experience: React, Cuda, Scala, R, ROS (Robot Operating System), ASP (Logic programming).

Software and Technologies:

Linux, GIT, Blender, Unreal Engine 4, Unity, Maya, Heroku, Amazon S3 and Motion Capture (OptiTrack).

Languages:

Spanish (Native)

English (Professional proficiency)

Extra-Curricular Activities

Graduate Teaching Assistant - UX / UI / Interaction Design

Sep 2019 - Present

Department of Visualization, Texas A&M University, TX, USA.

- Students with focus on interactive design have a semester long project and I help them with coding their apps and I get to learn a lot about design and communicating with people from different disciplines.

Undergraduate Research - Machine Learning & Performance Optimization

Mar – Jul 2015 (4 months - 9 hr/wk)

Pontificia Universidad Católica de Chile (PUC), Santiago, Chile.

Aug – Dec 2014 (5 months - 6 hr/wk)

- Research in scene recognition using images and Sparse Coding. As well as performance optimization for efficient processing using Google's hashing algorithm WTA (approximates dot products).

Research Assistant - Motion Capture

Aug – Dec 2014 (5 months - 6 hr/wk)

Psychology Department, PUC, Santiago, Chile.

- I had to assist a team of psychology researchers with technical issues, and also had to use, maintain and improve a 3D animation software that used Python, PyQt & OpenGL, and processed information from an OptiTrack motion capture system. The team used that to research about human behavior and coordination in conversations.
- This was a project funded by the National Commission for Scientific and Technological Research of Chile (the most important science institution in Chile) and was awarded more than \$160,000 USD (Fondecyt 1141136).

Part Time Full Stack Developer - Web Apps

Sep – Oct 2013 (2 months - 4 hr/wk)

ClipLabs, Santiago, Chile.

- Developed a web app in Ruby on Rails for managing a bike store.
- ClipLabs is a startup created on September 2013 with a team of four students.

Undergraduate Research - Robotics

The University of Texas at Austin (UT), TX, USA

Jan – May 2013 (4 months - 9 hr/wk)

- Research about Visual Navigation for robots. We read one paper per week.
- Tested a Visual Odometry library in a robot with a Kinect sensor and ROS software.

Teaching Assistant - Introduction to Programming

Sep – Dec 2012 (4 months - 5 hr/wk)

PUC, Santiago, Chile.

- Helped around thirty freshman students to learn Java with other TA in a computer lab 3 hours per week.
- Evaluated projects from the students.

Undergraduate Research - Computer Vision

Mar – Jul 2012 (5 months - 6 hr/wk)

PUC, Santiago, Chile.

- Research on how to detect features in images. These features are used for localization in robots (Visual SLAM).

Honors & Awards

Short-Term Research Scholarship

Jan 2016

Pontificia Universidad Católica de Chile

- Awarded a full scholarship to do a research internship at Texas A&M University for 2 months. Only 5 people were selected that year and the criteria was the best undergraduate research background.

Volunteer Work

Summer Camp Worker

Jan – Feb 2011 (2 months)

Word of Life, Guanacaste, Costa Rica

Worked in a Christian summer camp for teenagers organized by an international organization. I worked as cook, multimedia assistant and construction worker in the camp located in the Costa Rican jungle.



Relevant Coursework

- Artificial Intelligence
- Robotics
- Computer Animation
- Computer Graphics
- Data Structures and Algorithms
- Design and Analysis of Algorithms
- Distributed Systems
- Evolutionary Computation
- Human Computer Interaction
- Image Processing
- Life Drawing
- Pattern Recognition
- Software Engineering
- Color Theory
- 3D Animation and Modeling
- Virtual Reality