HERNALDO JESÚS HENRÍQUEZ NÚÑEZ

Education

M.Sc., Visualization   2019 - Present
Texas A&M University, TX, USA.

B.Sc., Computer Science   2009 - 2015
(Ingeniería Civil en Computación)
Pontificia Universidad Católica de Chile, Santiago, Chile.

Exchange Student, Computer Science   Spring Semester 2013
The University of Texas at Austin, TX, USA.
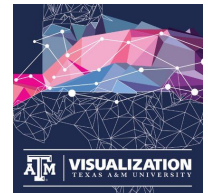

Experience

Graduate Teaching Assistant   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.

Full Stack Developer   Mar - July 2018 (5 months)
Papinotas, Santiago, Chile.
- Web app used in schools developed in React and Ruby On Rails.

Software Engineer   Oct 2016 - Feb 2018 (1 year 5 months)
Magnet SPA, Santiago, Chile.
- 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 Intern   Jan – Mar 2016 (2 months)
Texas A&M University, TX, USA.
Department of Computer Science & Engineering.
Advised by prof. Bruce Gooch (Ph.D. University of Utah),
- Work on Machine Learning for research in agriculture. For example, object recognition using images and NLP for voice commands. http://aggiecv.blogspot.com
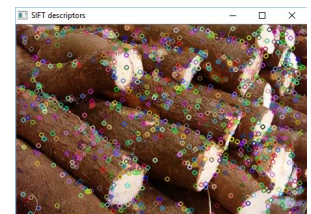
Part Time Software Engineer   Sep – Dec 2015 (3 months)
RSolver, Santiago, Chile.
- Android development of enterprise apps, one for stock management and other for real time monitoring.
- Worked full-time from Monday to Wednesday.

Updated on 28-09-2019
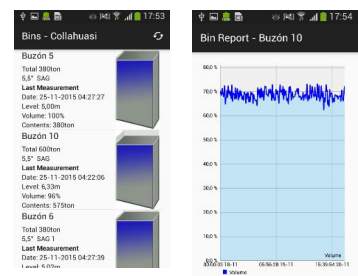
Software Engineering Intern   Jan – Feb 2015 (2 months)
Goplaceit, Santiago, Chile.
  ● Developed a Ruby On Rails app that generates reports about real estate using a large
    database with information from different countries in Latin America.

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.

Languages:
Spanish (Native)   English (Professional proficiency)

Extra-Curricular Activities

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)
Advised by prof. Alvaro Soto (Ph.D. Carnegie Mellon University), Department of Computer Science.
  ● 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   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)
Advised by prof. Todd Hester (Ph.D. UT), Department of Computer Science.
  ● 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.

Updated on 28-09-2019

- Evaluated projects from the students.

*Undergraduate Research - **Computer Vision***   Mar – Jul 2012 (5 months - 6 hr/wk)
PUC, Santiago, Chile.
Advised by prof. Alvaro Soto (Ph.D. Carnegie Mellon University), Department of Computer Science.
- Research on how to detect features in images. This 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 (Currently)
- 3D Animation and Modeling (Currently)
- Virtual Reality (Currently)