

# Ignacio Córdova

268 South Euclid, Pittsburgh, PA, 15206 / C: (412)-294-7468 / [ijcordov@gmail.com](mailto:ijcordov@gmail.com) /  
Portfolio: <http://ignaciocordova.weebly.com/>



## Educational Background

### Carnegie Mellon University (GPA: 4.0/4.0)

Pittsburgh, PA

Master of Science in Mechanical Engineering-Research Option

May 2018

- **Relevant Coursework:** DIY Design & Fabrication, Engineering Computation, Applied FEA, Mechatronic Design
- **Teaching Experience:** TA for DIY Design & Fabrication (Fall 2017) and Mechatronic Design (Spring 2018)

### Pontificia Universidad Católica de Chile (GPA: 6.1/7.0)

Santiago, Chile

Bachelor of Science, Mechanical Engineering

July 2012

- **Relevant Coursework:** Mechanical Design, Finite Elements Method, Computer-Aided Design, Product Design.
- **Teaching Experience:** TA for Solid Mechanics, Fluid Mechanics (5 semesters each) and Mechanical Design.



## Academic Project Experience

### Carnegie Mellon University

Pittsburgh, PA

Research project for the Computational Engineering and Robotics Lab (CERLAB)

Sept. 2017-May 2018

- Design, analysis and fabrication of an autonomous underwater robot for ship hull cleaning

Window Washer Robot

Jan. 2017-May 2018

- Developing an autonomous robot that can clean a window following a path (Class: Mechatronic Design)



## Extracurricular Project Experience

### Carnegie Mellon University

Pittsburgh, PA

SpaceX Hyperloop Pod Competition

Nov. 2016-May 2018

- Lead Engineer for the 2018 SpaceX Hyperloop competition

NASA SBIR Project "CubeRover for Lunar Resource Site Evaluation"

Aug. 2016-May 2018

- Contributed to the design and fabrication of a 2 kg lunar rover for the NASA SBIR program (Company: Astrobotic Inc)



## Work Experience

### Gecko Robotics, Inc

Pittsburgh, PA

Mechanical Engineer II

June 2018-Present

- Designed and analyzed components for sensor payload of a new fleet of inspection robots.
- Field testing of inspection robots

### Robotics Institute, Carnegie Mellon University

Pittsburgh, PA

Mechanical Engineer Intern

May 2017-Aug. 2017

- Designed and analyzed the suspension system of a robot for uranium deposits inspection inside pipes
- Creation of CAM files in Mastercam for the fabrication of different parts of the robot.
- Fabrication and assembly of several parts using CNC and manual machines.

### Soluciones de Diseño Integral S.A (Start-Up)

Santiago, Chile

Product Design Engineer; Business Associate

Feb. 2014-July 2016

- Redesigned the company's main product, Kanka Grill ([www.kanka.cl](http://www.kanka.cl)), resulting in improved product performance.
- Created and managed the assembly process for the Kanka Grill, resulting in a production of 3,000 units.
- Worked with a sourcing company from New York to start manufacturing the Kanka Grill in China.
- Developed a successful Kickstarter campaign for the Kanka Grill (USD \$35,000 in funding).

### Pontificia Universidad Católica de Chile

Santiago, Chile

Research Engineer

May 2013- Jan. 2014

- Researched the optimization of the location of marine hydrokinetic devices in the Chacao Channel in southern Chile for a government-backed research project (FONDEF), which led to the validation of an optimal arrangement that maximized the energy generated.

### Dictuc S.A

Santiago, Chile

Mechatronics Engineer Intern

Dec 2011- June 2012

- Designed and analyzed components for mechatronics projects for companies like Famae, Codelco, Chilectra, Komatsu and Sandvik, resulting in the fabrication of those components. Created a computational framework for a Fatigue Analysis of some components of a Chilean army truck, and producing a complete report for the client.



## Skills

**Application Software:** *Advanced*-Matlab, Ansys, Solidworks, Autodesk Inventor, Mastercam. *Intermediate*-Adobe Illustrator, LS-DYNA, Autodesk Fusion 360.

**Manufacturing:** *Advanced*-Laser Cutting, CNC Milling, 3D Printing, Lathe Machining.

**Programming Languages:** *Advanced*-C++, Python. *Intermediate*-Java, Arduino, Processing.

**Languages:** English (Fluent), Spanish (Native Speaker).



## Honors & Awards

**Fulbright Program Scholarship.** Partial scholarship to study at Carnegie Mellon University.

July 2016

**Becas Chile Scholarship.** Full tuition governmental scholarship to study at Carnegie Mellon University.

July 2016

**Valedictorian.** Mechanical Engineering Class of 2012 at the Pontificia Universidad Católica de Chile.

June 2012