OSCAR **FRIAS**

oscar@oscarfrias.com
Brooklyn, NY
www.oscarfrias.com

SKILLS

Machine Design:
- Mechanisms, structures, machine elements, stepper motors, trade studies

Part Development:
- Injection Molding, machining and sheet metal
- Material selection
- FMEA, DFM, GD&T and Tolerance Analysis
- Testing, DOE
- FEA and analysis-based design

CAD modeling:
- Solid and surface modeling in SolidWorks

Programming:
- Processing, Arduino, VBA, NodeJS

Prototyping:
- Manual & CNC machining, Rapid prototyping, welding, forging, composites, vacuum forming

EXPERIENCE

OCTOBER 2018 – PRESENT

PRINCIPAL ENGINEER, PENSA

- Technical lead for the DIWire family of CNC wire bending machines
- Develop accurate and affordable, desktop-sized, CNC wire bending machines and their tooling from concept to market
- Manage the manufacturing team and the software development team
- Lead and mentor junior engineers for client-based projects

OCTOBER 2015 – OCTOBER 2018

SENIOR DESIGN ENGINEER, PENSA

- Designing, prototyping, testing and delivering mechanical and electromechanical systems for products like a CNC wire bending machine, a robotic trash chute, a vending machine, a stroller, a baby monitor and other consumer and industrial products across a range of markets, developing them from concept to production-ready
- Managing client relationships and communications, and closely collaborating with multidisciplinary teams to ensure client and customer input is translated into requirements

AUGUST 2013 – SEPTEMBER 2015

PRODUCT DEVELOPMENT ENGINEER, UNILIFE

- Designed, developed and tested four novel, mechanically-actuated reconstitution syringe platforms, from conceptualization to production-equivalent devices
- Defined engineering specifications based on user-exerted forces and risk analysis results

MAY 2012 – JULY 2013

RESEARCH ENGINEER, CARNEGIE MELLON UNIVERSITY / ASTROBOTIC

- Manufactured, integrated and tested Earth-demonstration prototypes of the Polaris rover, its lunar excavator payload, and other mobile robotic exploration platforms

EDUCATION

MASTER OF PRODUCT DEVELOPMENT, 2012 - CARNEGIE MELLON UNIVERSITY

BS MECHANICAL ENGINEERING, 2006 - UNIVERSIDAD IBEROAMERICANA, MEXICO CITY

COURSES

- **Launchspace Space Vehicle Mechanisms, elements of successful design**. Santa Clara, CA. May 3rd, 2016
- **AAMI Human Factors for Medical Devices training**, Alexandria VA. March 2015

AWARDS

- **DELPHI 2012 Innovation Competition (Awarded 1st Place)** – Carnegie Mellon Developed a vehicle alignment system that allowed drivers to accurately park an electric vehicle over a wireless charging pad with a precision of +/- 1” on their first attempt

LEADERSHIP

- **Mentor for Girls Of Steel First Robotics team**, Fall 2012 – Summer 2013 – CMU FRC
- **Engineering intern coordinator**, 2016 – present – PENSA