

Alfonso Fernández
Alfonsofernandez2017@u.northwestern.edu
(847) 224-8302

7525 Karlov Avenue
Skokie, IL 60076

SKILLS

Mechatronics, Computers, and Discrete Mechanics

Electronics Design, including Microcontroller Programming, PID motor control, ROS, and terminal coding
CAD (Solidworks, NX, AutoCAD)
C++, C, Java, Python, MATLAB, Mathematica, and Microsoft Office

Mathematical Analysis and Simulation

Proficient in Statistical data analysis, and capable of executing discrete mechanics algorithms

Robotics

Actuator and Sensor Design
Soft Robotic Actuators
Artificial Intelligence & Machine Learning

Mechanical Design

Creative Problem solving
Traditional manufacturing methods, such as milling, turning, casting, sheet metalworking, and injection molding
Advanced manufacturing methods, such as CNC Machining and 3D printing

Language and Communication

Fluent in English and Spanish
Conversant in French and Italian
Excellent communication skills

Leadership

President and Founder of Slavic Literature Club
Founder and Coach of NRP Robotics Club
Counselor at YSI Leadership Camp
TA for ME 333 Mechatronics
President of Tau Beta Pi Illinois Gamma Chapter

WORK EXPERIENCE

Northwestern University, Evanston, Illinois

Research Aide: Neuroscience and Robotics Lab

Developed a heat-sensing LED array, currently on display in The Garage at Northwestern
Managed multiple projects involving coding, sensors, robotics, mechanical design, and electronics design
Obtained an REU Grant for Summer 2015
Developed mutual inductance proprioceptive sensors for compliant actuators
Currently working on novel shared human-robotic control algorithms for rehabilitative robotic devices

2015-Present

Teaching Assistant: Mechanical Engineering Department

TA for ME 333 Mechatronics

2016

Spanish Tutor: Department of Spanish and Portuguese

Instructed students of all levels in Spanish language skills
Tutoring sessions occurred in both one-on-one and group formats
Developed digital sign-in system for the Spanish Department tutoring program

2014-2017

Northridge Preparatory School, Niles, Illinois

Head Coach: Robotics Club

FIRST robotics club for grades 9-12, coaching a team in the FIRST Tech Challenge
VEX robotics club for grades 6-8

2016-Present

EDUCATION

Northwestern University, Evanston, Illinois

Bachelor of Science in Mechanical Engineering – Cum Laude, June 2017

Bachelor of Science in Manufacturing and Design Engineering – Cum Laude, June 2017

Master of Science in Mechanical Engineering (Focus: Robotics and Control), Anticipated November 2017

GPA: 3.74/4.00

ACHIEVEMENTS

Recipient of Cabell Fellowship 2017 (highest honor in McCormick School of Engineering for incoming graduate students)

Sole Recipient of 2015, 2016, and 2017 Arnold R & Edna F Weber Endowment Scholarships

Member, Pi Tau Sigma Mechanical Engineering Honor Society

President, Tau Beta Pi Engineering Honor Society Illinois Gamma Chapter

Northwestern Murphy Scholar (Research Grant 2013-2017)

Northwestern Ryan Scholar