Alexandre Leon

(213) 880-6003 | alexandre.leon.contact@gmal.com | www.linkedin.com/in/alexandre-leon

EDUCATION

University of California, Los Angeles (UCLA)

B.S in Electrical Engineering, Technical Breadth in Computer Science Expected June 2019

- **GPA:** 4.0 / 4.0 (Not Winter updated)
- **Transfer:** Santa Monica College in Fall 2017

Santa Monica College

General Science August 2015 – June 2017

- **GPA:** 3.89 / 4.0

Relevant UCLA Coursework

- **Electrical Engineering:** Signals and Systems (EE102 with 189 Honors Seminar), Probability and Statistics (EE131A), Engineering Electromagnetics (EE101A), Logic Design (EEM16), Physics for EE (EE2), Circuit Theory with lab (EE10, 11L), Introduction to EE (EE3)

Current Coursework Spring 2017

- **Computer Science**: Introduction to Computer Organization (CS33).
- **Electrical Engineering**: Graph Theory in Engineering (EE134), Circuit Theory with lab (EE110, 111L), Electromagnetic Waves (EE101B).

Relevant Coursework form SMC with UCLA Equivalent

- **Computer Science**: C language, C++ and Data Structures (CS31,CS32).
- **Mathematics**: Calculus of Several variables (32A&32B), Linear Algebra and Differential Equations (33A&33B).
- **Physics**: Mechanics, Oscillations, Waves, Electric and Magnetic Fields, Electrodynamics, Optics, and Special Relativity (1A,1B,4AL,4BL,1C).

Key Skills

- MatLab with common signal analysis tools (FFT, SFT, Autocorrelation)
- C++ programming with STL, C programming for Microcontrollers
- Beginner VERILOG and Logisim for logic Design
- Circuit and PCB design with EAGLE CAD
- Probabilistic modeling using relevant laws
- Proficient in various mathematical proof methods.
- Persistent and methodical in problem solving
- Strong written and communication skills, able to do presentations and written reports.
- Efficient at ranking and prioritizing tasks.
- Native French speaker, Conversational in Spanish.

Relevant Projects

System and Signals Advanced Honors Seminar Fall 2017

- Solved signal analysis problems using MatLab in a Honors Seminar limited to 20 students
- Wrote custom algorithms for Autocorrelation, Period Detection and Filtering
- Collaborated in a team of 2 for final project with written and oral presentation
- Design low complexity algorithm to analyze ECG using Sparse Fourier Transform
- Classified Noisy signals using probabilistic model

Probability Project – UCLA EE131A

Winter 2018

- Modeled Binary communication channels with Gaussian and Laplacian Noise
- Ran Monte Carlo simulations to determine the influence of Signal-to-Noise ratio on error rate
- Generated and analyzed Bit Error Curves.
- Compiled methods and analysis in a comprehensive paper.

IDEA HACK 2018 – Automated AAA Battery Charger January 2018

- Solved an open-ended problem in Home Automation in a 36 hours Hackathon
- Collaborated in a team of 3 with Mechanical and Computer Engineering students
- Designed a AAA battery analyzer (voltage, orientation) circuit with custom 3D printed frame
- Primarily programmed a control system using an Arduino C++ based MCU
- Overviewed and taught soldering techniques for perfboard assembly
- Achieved a functional prototype demonstrating the battery analysis circuit

Advanced Projects – IEEE UCLA

Team Member Fall 2017 - Current

- Collaborated in a team of 4 to build a quadcopter vehicle
- Programmed custom library for RC communication for Arduino in C++
- Researched motor control designs and embedded system.
- Designed schematics and PCB using EAGLE CAD