

# Juan José Neri

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## EDUCATION

### LOYOLA MARYMOUNT

Exp Dec 2018 | Los Angeles, CA  
Cum. GPA: 3.90

#### B.S. IN APPLIED MATH

Advisor: Thomas Laurent  
GPA: 3.96

#### B.S. IN COMPUTER SCIENCE

Advisor: Ray Toal  
GPA: 3.87

#### MINOR IN PHYSICS

Advisor: David Berube  
GPA: 4.0

### STANFORD UNIVERSITY

Jun - Aug 2017 | San Francisco, CA  
**SUMMER SESSION 2017**  
GPA: 3.70

### UDELAR

Feb - Jul 2015 | Montevideo,  
Uruguay

#### ELECTRICAL ENGINEERING

GPA: N/A

## LINKS

Website: [juanjoneri.com](http://juanjoneri.com)  
Github: [juanjoneri](https://github.com/juanjoneri)  
LinkedIn: [Juan José Neri](#)  
Facebook: [juanjoneri96](#)

## SKILLS

### PROGRAMMING

Advanced :

Python (Sklearn, TensorFlow,  
Pytorch, NumPy, Pandas) · Bash  
(Ubuntu, MacOS) · Java · Git · Web  
(JS, CSS, HTML) · MATLAB

Intermediate:

C++ ·  $\text{\LaTeX}$  · SQL · Mathematica

Basic:

WebGL · Elm · Neo4J · MongoDB

### LANGUAGES

Proficient:

Spanish · English

Basic:

German

## RESEARCH

### RAINS | COMMUNITY DETECTION IN LARGE SOCIAL NETWORKS

Jan 2018 – Present | Department of Mathematics | Supervisor: Dr. Laurent

- Finish writing paper: "A New Algorithm for Community Detection in Large Social Networks"
- Migrate the new graph partitioning algorithm to Python's high performance machine learning libraries TensorFlow and Pytorch.

### UROP | COMMUNITY DETECTION IN LARGE SOCIAL NETWORKS

Aug 2017 – Dec 2017 | Department of Mathematics | Supervisor: Dr. Laurent

- Begin writing paper: "A New Algorithm for Community Detection in Large Social Networks"
- Build a python module for manipulating and visualizing large connected graphs.

### RAINS | COMMUNITY DETECTION IN LARGE SOCIAL NETWORKS

Jan 2017 – May 2017 | Department of Mathematics | Supervisor: Dr. Laurent

- Implement a new algorithm for state of the art graph clustering in large social networks using MATLAB
- Conduct a thorough study of its mathematical properties. We show that it monotonically increases a quality function.

## TEACHING EXPERIENCE

### TA SUPERVISOR | MATHEMATICS DEPARTMENT

Jan 2017 – Dec 2017 | Loyola Marymount University

Work directly with the head of the Math department and TA body to help manage the TA program and ensure that it overall runs smoothly.

### ROBOTICS TEACHER | SEMINARIO HIGH SCHOOL

May 2016 – Aug 2016 | Colegio Seminario

Teach the basics of circuit design, python3 programming, version control, and Linux command line in the context of Raspberry Pi 3 to advanced high school students.

### LAB ASSISTANT | MATHEMATICS & PHYSICS DEPARTMENT

Aug 2017 – Present | Loyola Marymount University

- Phys 201 Introduction to Electricity and Magnetism.
- MATH 103 Excel lab, computer spreadsheets, probability and statistics, and the mathematics of finance.

### MULTIVARIABLE CALCULUS TUTOR | MATHEMATICS DEPARTMENT

Jan 2016 – Dec 2013 | Loyola Marymount University

Help students with homework on Partial derivatives, multiple integrals, vectors in two-and-three-dimensional space, line integrals, etc.

### GRADER | MATHEMATICS DEPARTMENT

Sep 2016 – Present | Loyola Marymount University

Grade homework for MATH 103, 104, 123, 131, 245

## COURSEWORK

### MATHEMATICS

Probability / Stats  
Real Analysis  
Complex Variables  
Group Theory  
Methods of Applied Math  
Numerical Methods  
Putnam Preparation

### COMPUTER SCIENCE

Machine Learning  
Artificial Intelligence  
Data Structures  
Algorithms  
Programming Languages  
Computer Graphics  
Interaction Design  
Database Systems

### PHYSICS

Elementary Particle Physics  
Space Physics  
Intermediate Mechanics

## CERTIFICATES

### LANGUAGES

Cambridge English Proficiency (CPE)  
Certificate in Advanced English (CAE)  
First Certificate in English (FCE)  
Young Learners Course (ih)  
Intermediate German II (LMU)

### ONLINE COURSES

Udacity  
Intro to Machine Learning  
How to Use Git and GitHub  
Lynda.com  
Building and Deploying Deep  
Learning Applications with  
TensorFlow  
NumPy for Data Science  
Pandas for Data Science  
Python GUI Development  
Raspberry Pi: GPIO  
Linux: Multitasking  
Unix for Mac OSX  
Bash Scripting  
Android App Development  
Learning Mathematica 10  
Udemy  
Become an Android Developer from  
Scratch

## INTERESTS

Machine Learning · Cloud  
Computing · Embedded Systems ·  
Programming Languages · Robotics  
· Education

## PROJECTS

### OLIVE | PROGRAMMING LANGUAGE FOR DATA SCIENTISTS

Jan 2018 – Present | LMU | Compilers group project  
Designed and implemented a programming language that combines the  
expressiveness and power of Python with the first class support for matrix  
and array mathematics of languages like Julia and MATLAB.

### BAMBINAIA | WEB APP USING GOOGLE'S POLYMER AND FIREBASE

June 2017 – Dec 2017 | LMU | Database final group project  
Implement Website for pairing nannies and mothers in real time using  
Google's new Polymer 2.0 front end library for web components with  
JavaScript and Google's firebase API for database management.

### IOIO QUADCOPTER | ANDROID POWERED DRONE

Jan 2014 – Jun 2014 | UDELAR | Group project  
Use sensors in an Android phone to establish a closed loop control system  
for a drone. The phone communicates with the rotors using the IOIO OTG  
board and updates the speed of each one 60 times a second using a PID  
model with the data collected from the gyroscope and accelerometer.

### LIFELOG | ANDROID APP USING SQLITE AND DROPBOX'S API

Sep 2015 | Personal project  
Build an android app using Android Studio, Dropbox API and Wolfram  
Mathematica, to keep track of my daily routine and expenses on an SQLite  
database.

## WORK EXPERIENCE

### STUDENT RESERVE BOARD

Sep 2016 - May 2017 | LMU  
Member of the board that assigns financial assistance to University clubs  
and organizations through the co-sponsorship of events and activities

### INTERNATIONAL OUTREACH

Sep 2016 - May 2017 | LMU  
Assist prospect international students with the application process to  
Loyola Marymount University.

## AWARDS

2018	LMU	Dean's List, all semesters
2017	SPS	Chapter Research Award
2017	LMU	Student Organization of the Year (RCC)
2015	LMU	Full Scholarship for Outstanding South American Students
2014	OEI	Iberoamerican Olympiad, Uruguay physics delegation member
2014	mec	Physics National Olympiad 2nd Place

## ORGANIZATION MEMBERSHIPS

2017	Member	Society of Industrial and Applied Mathematics (SIAM)
2017	Member	Society for Advancement of Hispanics (SACNAS)
2016	Co-founder	Radio Control Club (LMU RCC)
2015	Co-founder	Society of Physics Students (LMU SPS)
2015	Member	Engineers Without Borders (EWB)
2015	Member	Program for an Engineering Education (LMU PEEC)

## CONFERENCES

2017	USC	Southern California Machine Learning Symposium
2017	Utah	SACNAS Annual Conference
2017	UCSB	Pacific Coast Gravity Meeting
2016	Caltech	Southern California Machine Learning Symposium
2016	San Francisco	PhysCon 2016