

# LAWRENCE GRANDA

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## EDUCATION

Cornell University | B.S. of Engineering in Computer Science

Aug 2023 – May 2027

- **Relevant Coursework:** Multivariable Calculus, Object-Oriented Programming and Data Structures, Operations Research project.

## LANGUAGES

English

Bilingual Proficiency

Spanish

Native

Galician

Native

Portuguese

Professional Working Proficiency

## PROGRAMMING SKILLS

**Proficient:** Python (Pandas, NumPy, Keras, TensorFlow), and Java.

**Exposure:** Python (Matplotlib, Scikit-learn, Flask, PyTorch), HTML/CSS, JavaScript, SQL (SQLite), MATLAB, Google AppScript.

## PROJECTS

University Course Catalog Web App | Flask Website

Feb 2023 – Jul 2023

- Developed a Flask-based web app to optimize course information accessibility for 3800+ university courses.
- Processed JSON data with Pandas, and integrated AJAX for real-time interactions.
- Designed a seamless UI/UX using HTML, JavaScript, and CSS for real-time search and course planning.
- Employed statistical analysis to display course metrics such as average grades and highlight top-performing professors.

Sleeve Color Detection and Autonomous Parking | Computer Vision in Java

Oct 2022 – Apr 2023

- Created an image processing pipeline using OpenCV and Java for robotics, detecting sleeve color for parking.
- Implemented a HUE-based color detection algorithm to efficiently analyze real-time camera frames.
- Demonstrated successful color identification and autonomous parking in competition scenarios.

Garbage Detector | Machine Learning & Computer Vision in Python

May 2022 – Jul 2022

- Acquired knowledge in image segmentation techniques through in-depth online courses and research papers.
- Developed a model in Python using Keras and TensorFlow, employing an uNet architecture with a pre-trained backbone.
- Achieved an IoU score of 0.52 and an F1 score of 0.62, indicating accurate garbage detection.

Science NHS Leaderboard and Point System | Flask Website & Dataflow System

Mar 2022 – Aug 2022

- Launched a real-time ranking website using Flask, HTML/CSS, and JavaScript for Science NHS's point tracking.
- Used Git to synchronize the website with the code hosted on GitHub (website: <https://twhssnhs.granda.dev>)
- Implemented a custom dataflow system using Google AppScript, Sheets, Forms, and Google Sheets API.
- Replaced outsourced service with free, fully automatic system, improving efficiency and cost-effectiveness.

Function Analyzer | Java Application and JavaScript Website

Nov 2021 – Jun 2022

- Implemented Bisection and Newton's methods recursively to find the real roots of mathematical functions.
- Developed a responsive 1-page website with JavaScript, HTML/CSS, and Bootstrap.
- Created a Java application with interactive GUI using Java Swing for user-friendly experience.
- Website: <https://analyzer.lawrencegranda.me>

Housing Prices Prediction | Machine Learning & Data Analysis in Python

Dec 2021 – Jan 2022

- Predicted California housing prices using various machine learning models (RandomForest, TensorFlow, Keras)
- Utilized Pandas, Scikit-learn for data preprocessing, normalization, and feature engineering.
- Achieved an average deviation of \$27,891 from actual California house prices.

## RELEVANT COURSES & CERTIFICATIONS

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### Machine Learning

Stanford University

### Introduction to TensorFlow for AI, and Machine Learning

DeepLearning.AI

### Mathematics for ML: Linear Algebra, Calculus, and PCA

Imperial College London

### CS50x: Introduction to Computer Science

Harvard University

### TensorFlow Developer Professional Certificate

DeepLearning.AI

### Sequences, Time Series and Prediction

DeepLearning.AI

### Game Theory

Stanford University & The University of British Columbia

### CS50p: Introduction to Programming with Python

Harvard University

## BUSINESS EXPERIENCE

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### BeHappy Investments Venture Capital Investment Group | Observer

August 2023 – Present

- Advocate for sustainable initiatives and the rural revitalization of Spain.
- Participate in board meetings, gaining insights into current and future investments.
- Conduct research and analysis on proposed investments, offering valuable youth perspectives.

### ArquiNewton | Observer

Dec 2021 – Present

- Contribute to a patent-pending engineering start-up focused on generating energy from gravity and water.
- Collaborate with a diverse group of Spanish and American inventors, engineers and consultants.
- Address project challenges and provide valuable insights and contributions.

### San Telmo Business School ADEL 2023 Module | Student

July 2023

- Completed one out of the four modules of the Senior Management Programme for Leading Companies.
- Analyzed business decisions of prominent companies (Nestlé, Santander, Eleser, Ametel) using the case study method.
- Recognized as the youngest student in the history of the program.

### Chamber of Commerce of Alicante | Two-time Guest Speaker

11 June 2021 & 9 June 2023

- Delivered two speeches highlighting the significance of business education for youth.
- Addressed an audience of approximately 100 local business owners during the speeches.

### LimonPark | Observer and Youth Representative

Jun 2019 – Mar 2020

- Participated in a social media and software development start-up aimed at creating a children's social media platform.
- Attended meetings to contribute to discussions on marketing, launching, and go-to-market (GTM) strategies.
- Collaborated with the design team as a target audience representative, assessing the quality of features and designs.

## OTHER EXPERIENCE

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### TWHS Robotics | Team Captain, Vice President & CAD Lead

Aug 2021 – May 2023

- Led a 10-member team in designing, building, and programming a robot for the 2022-2023 FTC Competition.
- Supervised the entire build, design, and programming processes to ensure efficient teamwork and timely completion.
- Developed a Java-based computer vision algorithm using OpenCV to autonomously determine optimal routes.
- Achieved outstanding results: winning team of the Houston Regional competition and Texas UIL 6A runner-up.

### Science National Honor Society | Secretary

Jan 2022 – May 2023

- Elected Secretary of TWHS Science NHS charter, overseeing 200+ members during the 2022-2023 school year.
- Developed a dataflow system using Google AppScript, Google Sheets, and Google Forms to accurately track points.
- Managed over 3,800 data entries, and collected over \$4,000 in student fees.

### AEMPYMES Kids | President and Founder

Jan 2019 – Dec 2020

- Founded AEMPYMES Kids, a nationwide program in Spain fostering entrepreneurship among children.
- Led brainstorming sessions to generate ideas for improving our community and promote teenage innovation.
- Collaborated with AEMPYMES mentors to analyze idea proposals and ensure their viability.

### Crypto Investor

Jun 2020 – Dec 2021

- Conducted analysis of diverse cryptocurrencies and blockchain projects to identify investment opportunities.
- Evaluated emerging projects within the blockchain ecosystem to support informed investment decisions.
- Strategically invested in cryptocurrencies and blockchain ventures, yielding a remarkable 300% return on investment.