

# Giovanni Cornejo

COMPUTER ENGINEERING · DATA SCIENCE

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## Education

### University of Florida

Gainesville, FL

MASTER OF SCIENCE IN ELECTRICAL AND COMPUTER ENGINEERING

Aug 2024 - May 2026 (Expected)

- Area: Signals & Systems; Tracks: Signal Processing, Machine Learning & AI
- Coursework: Digital Signal Processing, Fundamentals of Machine Learning, Hardware Security and Trust

BACHELOR OF SCIENCE IN COMPUTER ENGINEERING

Aug 2019 - May 2023

- Cumulative GPA: 3.62/4.00; cum laude
- Coursework: Performant Programming in Python, Signals and Systems, Operating Systems, Computer Engineering Design

## Skills

**Programming Languages:** C/C++, Python, HTML, CSS, JavaScript, SQL, Rust, MATLAB  
**Libraries and Frameworks:** scikit-learn, pandas, numpy, matplotlib/seaborn, Django, Flask  
**Tools:** Git, Jupyter Notebook, Visual Studio, Bash, Microsoft Office

## Experience

### Publix Super Markets

Gainesville, FL

FRONT SERVICE CLERK

Sep 2021 - Jul 2023

- Provided premier customer service, handled transactions and customer interactions with professionalism and attention to detail.
- Maintained a clean and organized work environment, ensuring adherence to safety standards.
- Applied proactive measures to reduce shrinkage and ensure operational efficiency.

### University of Florida

Gainesville, FL

TEACHING ASSISTANT

Feb 2023 - May 2023

- Conducted accurate and efficient data entry and grading for student assignments, upholding data integrity and privacy.
- Monitored student progress and assisted in accomplishing established learning objectives.
- Analyzed the efficacy of materials taught based on student performance.

### Knack

Remote, USA

FREELANCE TUTOR

Nov 2020 - Jun 2021

- Provided customized tutoring sessions in calculus and programming, achieving a 5/5 rating.
- Developed unique lesson plans tailored to individual student needs, significantly enhancing academic performance.
- Improved student understanding through clear, effective communication techniques.
- Helped raise one student's grade from C+ to A- in Calculus 1 and in maintaining an A in Calculus 2.

## Projects

### Undergraduate Capstone: Qtune Automatic Guitar Tuner

CIRCUIT DESIGN, EMBEDDED SYSTEMS, CIRCUITPYTHON

- Utilized an Adafruit Feather RP2040 to create a tuner that analyzes the frequency of guitar string vibrations.
- Implemented intelligent circuit design and a piezo sensor for precise frequency measurement within  $\pm 0.5$  Hz.
- Developed a system for instant adjustments using servo motors attached to each tuning peg.

### Spam Message Classifier

PYTHON, JUPYTER NOTEBOOK, SCIKIT-LEARN, NLTK

- Conducted comprehensive exploratory data analysis revealing class imbalance, addressed using random oversampling.
- Developed a supervised learning model achieving 99.95% accuracy using TF-IDF vectorization and Random Forest.
- Evaluated model performance with confusion matrices and ROC curves, ensuring robust classification metrics.

### Moodipy: Sentiment-Based Spotify Playlist Generator

PYTHON, SPOTIFY API, XSERVER, QT

- Applied sentiment analysis techniques to generate Spotify playlists based on user input and liked songs metadata.
- Spear-headed the comparison of song audio features against emotional output to determine which songs matched the user's emotion.
- Predicted songs likely to rise in popularity from newest songs of the week and current top 50 Global Songs.