

# COLIN NGO

cngo27@calpoly.edu | 626.688.7617 | github.com/clngo | https://www.linkedin.com/in/colin-ngo654/

## EDUCATION

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### California Polytechnic State University, San Luis Obispo

B.S. Computer Science

San Luis Obispo, CA

September 2022 – June 2026

- **GPA:** 3.6
- **Relevant Courses:** Public Speaking, Introduction to Communications, Intro to Computer Organization, Calculus III, General Physics I, Project Based Object Oriented Programming and Design

## PROJECTS

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### Hand Landmarks Detection

Los Angeles, CA

Independent Project

December 2022 – January 2023

- Using the MediaPipe Hand Landmarker, enabling accurate landmark detection of hands, ensuring robust and efficient performance
- Successfully integrated the hand detection device with image data, both as static data and in real-time continuous streams
- Utilized image coordinates to design and implement a visual effects rendering system overlaying effects for detected landmarks
- Accommodated multiple hand detection and provided accurate handedness identification (left/right hand) for each detected hand

### Object-Oriented Program and Design World

San Luis Obispo, CA

Student Developer

April 2023 – June 2023

- Developed a custom Java class incorporating object-oriented concepts such as type casting, access modifiers, polymorphism, method overloading, single responsibility principle, coupling, cohesion, information hiding, abstract inheritance, and generics
- Design an inheritance hierarchy with an abstract superclass and multiple concrete subclasses which incorporates method overriding
- Created comprehensive unit tests to achieve full code coverage, ensuring the accuracy and reliability of the class's functionality.

### Encryption and Decryption Program

Los Angeles, CA

Independent Project

March 2023 – March 2023

- Implemented Fernet encryption to guarantee message integrity and confidentiality, preventing unauthorized access to sensitive data
- Utilized key generation to securely create and manage encryption keys, ensuring the secrecy of the master password
- Created encryption and decryption functionalities to securely store/retrieve passwords, demonstrating commitment to user safety

## OUTSIDE EXPERIENCE

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### Eagle Scout Service Project Community Garden

Los Angeles, CA

Assistant Senior Patrol Leader

March 2022 – April 2022

- Revitalized an underutilized Boys and Girls Club community garden by implementing a comprehensive refurbishment plan
- Mobilized and coordinated a team of 12 dedicated volunteers, assigning tasks such as cleaning, topsoil replacement, watering, and proper plant installation using appropriate equipment and techniques while orchestrating meticulous refurbishment efforts
- Demonstrated personal commitment by contributing approximately \$500 of personal funds to the project budget, ensuring the successful execution of the garden refurbishment initiative with responsibility for managing project expenses, safety measures, logistics, and securing necessary permissions; coordinating efforts between the Boy Scout Troop and the Boys and Girls Club.

### Boys and Girls Club

Los Angeles, CA

Academic Mentor

September 2021 – May 2022

- Enabled 50+ children ages 5-13 years old in English, Math, Social Science, and daily homework; improved homework completion.
- Co-led various sporting events and hosted tournaments such as flag football, basketball, dodgeball, and other outdoor activities.
- Responsible for transportation of sport equipment, snacks, water, safety and well-being of all students involved.

## AWARDS

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- National Qualifier for National Speech and Debate Association, June 2021
- Academic All American, March 2022
- Boy Scout Eagle Rank, May 2022
- Music Teachers' Association of California Certificate of Merit Advanced Level 10

## SKILLS & INTERESTS

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**Skills:** Programming Languages: Java, Python, Scratch, C, Assembly

Technical Skills: 145 WPM, Canva, Zoom, Microsoft Office (Powerpoint, Excel, Outlook, Word), Google Suite (Drive, Slides, Sheets, Docs, Photos, Classroom, Site, Forms, Calendar, Slack, Design (Photoshop, Filmora, Adobe Illustrator)

Software Tools: Visual Studio Code, Git, PyCharm, Godot

**Interests:** Investing, Swimming, Game Development, Duolingo, Leetcode, Codeforces, Video Editing, Running

**Languages:** English (native), Chinese (beginner), Japanese (beginner)