


# NEEL GANDHI

 (786) 468-3333

 ngandhi@andrew.cmu.edu

 Pittsburgh, PA

 linkedin.com/in/gandhi-neel

 sirlegolot.github.io

## EDUCATION

### Carnegie Mellon University (2018-2022)

Bachelor of Science in Electrical and  
Computer Engineering  
Minors in Biomedical Engineering and  
Computer Science  
GPA: 4.0, Dean's List

#### Relevant Coursework (Current\*)

15-213 Computer Systems  
15-210 Parallel/Sequential Algorithms  
18-240 Digital Systems Design  
10-301 Machine Learning\*  
15-462 Computer Graphics\*  
42-688 Neural Engineering  
15-150 Functional Programming  
15-122 Fundamentals of CS

## SKILLS

#### Programming Languages

Python, C, MATLAB, Java, SML,  
Assembly, Mathematica, HTML/CSS/JS

#### Technologies

Google Cloud SDK, Android Studio  
(Basic), Robot Operating System (ROS),  
Flutter (Basic), Unity (Basic)

## HACKATHONS

**MHacks 2020** – Facebook "Best Hack  
Brings the World Closer Together"  
**TartanHacks 2019** – Finalist and  
Facebook "Social Impact" award  
**PennApps 2019** – Goldman Sachs award  
**Hack This. Help Kids. 2018** – Finalist  
**HackCMU 2018** – 2nd place for  
Bloomberg social good award  
**SteelHacks 2019** – 4th place

## ACTIVITIES

**RoboClub** – Data collection for object  
detection models, trajectory, and  
electronics for Tartan Autonomous  
Underwater Vehicle team.  
**Business Technology Group** –  
Backend developer for club's first  
website, using AWS and flask.  
**Science Olympiad** – Circuit Lab exam  
writer for CMU's tournament.

## EXPERIENCE

### 15-210 Parallel Algorithms TA

Carnegie Mellon University | Pittsburgh, PA | Aug 2020-Present

Teaching Assistant for Parallel and Sequential Data Structures and Algorithms.

- Lead recitations, hold office hours, and grade homework assignments.
- Teach with SML, a functional programming language.
- Topics include asymptotic analysis, probability theory, parallel algorithm design, graph theory, dynamic programming, hashing, and concurrency.

### Google Shopping Intern

Google, Inc. | Virtual Software Engineering Internship | May-Aug 2020

Developed a product cataloging platform to connect customers with local businesses impacted by COVID-19.

- Utilized Google Vision AI to create a seamless interface that automatically tags and classifies products from images uploaded by a business owner and allows customers to reverse image search for those products in the catalog (OCR, label and object detection, product image search).
- Completed entire development process: Proposing the project, writing design docs, implementation, design reviews, and launching the product on Google Cloud.
- Full Stack development with Google Cloud App Engine, Google Cloud Datastore, Java Servlets, and HTML/CSS/JS.

### Undergraduate Researcher

Carnegie Mellon University | Pittsburgh, PA | Feb 2019-May 2020

Worked in the Biomedical Functional Imaging and Neuroengineering Lab researching on brain computer interfaces (BCI).

- Applied EEG to detect and utilize motor-related brain signals that could be used to control a robotic arm.
- Developed a MATLAB-based software to stream/process EEG data to perform BCI tasks.

## PROJECTS

### We Have A Car (Mini Autonomous Car) Build18 Hardware Hackathon 2020

- Utilized a ZED Mini depth camera, lidar, and Jetson Xavier to build a mini autonomous car that performs Simultaneous Localization and Mapping (SLAM) of an unknown environment.
- Worked primarily on the lidar and Hector SLAM, a ROS package that performs SLAM with lidar, as well as the mechanical construction of the vehicle with VEX parts.

### Hide.Me (Steganography Messaging) CS 15-112 Term Project

- Implemented various steganography algorithms to encode and encrypt secret data inside images, all within a messaging application created using python sockets.

### CMU Postal Services but better Build18 Hardware Hackathon 2019

- Collaborated with a team of 5 to design a package sorting and delivery system that utilizes computer vision with OpenCV, SQL, and LED indicators to improve mailroom solutions.

### Lab.Me (AR Chemistry Lab) TartanHacks 2019 award winner

- Designed an augmented reality chemistry lab with Unity and Vuforia engine, aimed towards providing science lab education to the underprivileged.

### Build.Me (Hand-gesture CAD) SteelHacks 2019 award winner

- Built an alternative CAD modeling software that uses hand gestures to create 3D objects with a Leap Motion controller and Unity.

### Mula. PennApps 2019 award winner

- Made an app with Flutter that uses sentiment analysis of news articles to predict future stock prices.