# NICOLAS NEBEL

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## EDUCATION

UC San Diego — Class of 2022

- Computer Science (B.S.)

## EXPERIENCE

Robotics Club - *Computer Vision Lead* — 2015 - 2016

- Taught students how to program in C++ using OpenCV on Linux
- Led creation of software to detect reflective targets using a camera

Robotics Club - *R&D Lead* — 2016 - 2017

- Led creation of and coded animatronic cow, humanoid robot, wiffle ball shooter, and interactive team booth

## PROJECTS

java-3d-renderer — git.io/fxJLY

- Pure software real-time 3D renderer written in Java using the standard 2D libraries. Includes .obj file reader and first person camera

vulkan-renderer — git.io/fxjLZ

- An in-progress real-time renderer using Vulkan written in C++

donkey-models — git.io/fxJLl

- A collection of models and scripts in python used to run and train a self driving r/c car.
- Uses Keras models on donkeycar platform running on Raspberry Pi

## AWARDS

NAVAIR FRCSW Advanced Technology & Innovation Prize @ SD Hacks — Oct. 2018 — git.io/fxoVy

- Led team in creating VR tool in C# and Unity to help filmmakers film VFX shots and 3D animations by placing them in their virtual scene with a virtual camera

Best In Show @ SD County Fair — July 2017

- Chest up humanoid made using Arduino won out of entire county
- Led project, wired electronics, designed in Solidworks, and coded in Arduino C

Most Unique @ CodeDay San Diego — Nov. 2016 — git.io/fxoVh

- Game made in Unity3D that pits a car against a plane

Blue Ribbon Award @ SD Maker's Fair — Oct. 2016 — git.io/fxowT

- Phone controllable animatronic cow won out of over 100 projects
- Led project, coded Arduino controller and wired electronics.

## SKILLS

**Languages:** C++, Java, Python, C#

**Technologies:** OpenCV, Unity3D, Arduino, Vulkan, Keras