# Jonathan Goenadibrata

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# **Summary**

A highly motivated and team-oriented future Mechanical Engineer who is interested in Robotics & Controls. A fast learner curious in discovering new things.

Education GPA: 3.43

University of California, San Diego | Mechanical Engineering B.S.

Expected Jun 2021

**Relevant Coursework:** Solid & Fluid Mechanics, Properties & Mechanics of Materials, Engineering Graphics & Design, Circuits & Devices, Autonomous Vehicles, Controls & Systems

# **Projects**

AssaultMIP | University of California, San Diego

Jan 2020 - Present

- Design and optimize a Mechanical Inverted Pendulum (MIP) that could pick up, store, shoot ping pong balls, and self-balance itself while achieving it with only 4 actuators
- Developed a wheel using SolidWorks to pick up ping pong balls from the ground into the body of the MIP thus lowering the need for more actuators

**QRnTeam** | University of California, San Diego (bit.ly/jonathangoQRnTeam)

Aug 2020 - Sep 2020

- Constructed and Programmed using ROS the Jetson Nano to read and adjust its speed based on special "Road Signs" using ArUco Markers
- Achieved a live footage of the Jetson Nano detecting multiple signs as well as its position and orientation in the 3D space while displaying the current speed of the Jetson using OpenCV

**Team Jack** | University of California, San Diego (bit.ly/jonathangoMAE3)

Sep 2018 - Dec 2018

- Planned, designed, and optimized a working robot capable of scoring in a miniature sports arena with limited resources and time using Autodesk Inventor therefore gained experience with CAD software
- Designed and fabricated a 1:9 ratio gear configuration, creating a shovel capable of lifting a load of 1 kg, 300% heavier than the maximum load in a typical configuration
- Created a chassis design allowing a 25in vertical lift with its initial position still contained in a 10in x 10in x 10in

## Leadership Experience

San Diego Indonesian Association | Marketing Design

Jan 2020 - Jul 2020

- Worked in a team of 12 people and collaborated on ideas for important events to gather Indonesian students in San Diego and help them establish connections
- Developed marketing strategies to gain exposure on the club's social medias and events, achieving a 400% increase in instagram interactions
- Shot and produced videos using Adobe Premiere Pro for officers' recruitments to promote and inform members of their job desks, achieving a 100% increase in applicants compared to the previous year

### IndoDVC, Diablo Valley College | Marketing & Design

Nov 2016 - Nov 2017

- Created marketing weekly posters as graphic designer of DVC's Indonesian Student Association consisting of 200 students to update on upcoming events
- Coordinated a banquet for transferring students with a \$10,000 budget

### **Skills**

**Major Related:** SolidWorks, MATLAB, Engineering Drawing, Arduino, ROS, 3D Printing, OpenCV, Python **Interest:** Adobe Photoshop, Adobe Premiere Pro, Adobe Illustrator