

Dylan Shane Tabalan

(832) 540-8401 | dylantabalan@gmail.com | [dtabalan.github.io](https://github.com/dtabalan)

EDUCATION

California Polytechnic State University, San Luis Obispo (Cal Poly)

June 2023

• B.S., Mechanical Engineering

❖ **Mechatronics Concentration** | *GPA*: 3.48

Skills: CAD (Solidworks), Python, MATLAB/Simulink, Geometric Dimensioning & Tolerancing (GD&T), Composites Manufacturing, Finite Element Analysis (FEA), Programmable Logic Controllers (PLC), Design for Manufacturing (DFM)

WORK EXPERIENCE

Systems Manufacturing Engineer I

Aug 2023 - Present

Boeing Commercial Airplanes

- Improves 777/777X installation plans for airplane systems by validating and executing the tooling/manufacturing projects
- Collaborates with technicians and engineers to implement tool process improvements to cut \$14K and 3 months of lead time per airplane for the pilot heads up display alignment/installation
- Utilizes CAD models to conduct change reviews for assembled planes with production teams to initiate removal plans

☞ Manufacturing Automation Lab Assistant

Apr 2023 - June 2023

Cal Poly Industrial & Manufacturing Engineering

- Developed IME 356: 'Manufacturing Automation' lab materials for Yaskawa's MP2300Siec controller, MotionWorks 3 IEC, and 2 servo motors based on Yaskawa product orientations to teach students ladder logic manufacturing applications
- Advised student term projects that included the use of PLC programming (Rockwell Allen-Bradley), Keyence XG machine vision, human-machine interfaces (HMI), pneumatics, servos, and sensors

Product Development Production Engineering Intern

June 2022 - Sept 2022

Boeing Commercial Airplanes

- Collaborated with technicians and BR&T (Boeing Research & Technology) across the nation to support activities to address composite fabrication deviations that could impact design intent, safety, and product/process improvements
- Established a foundation for development of shimless manufacturing and assembly processes in a high mix, low volume future production system by acquiring manufacturing data and contacts across the nation and internationally
- Created a standard handbook for all future Product Development interns to assist department specific intern onboarding

Product Research & Testing Intern

July 2021 - Oct 2021

Voodle

- Led user studies including usability testing, surveying, synthesized reports, and new product design proposals to provide design suggestions that could improve the start-up video sharing app
- Collaborated cross-functionally with software engineers and managers to implement developmental app features

PROJECTS

☞ University Rover Challenge

Sept 2022 - June 2023

Senior Project

- Assisted in the overall design, build, programming, and testing of an all-terrain base rover capable of wireless remote control through multiple design reviews, prototypes, verification tests, and generation of documentation
- Generated bill of materials for all components of the electronics system including battery, power distribution, and fuse box to meet performance requirements while minimizing operational and electrical hazards
- Manufactured and assembled the electronics system by crimping, soldering, and wiring the electronics and components

☞ Battleship Robot

Sept 2022 - Dec 2022

ME 405: Mechatronics | Term Project

- Designed, manufactured, programmed, and tested a device with 2.5 degrees of freedom, capable of launching ping pong balls over a 3' wall with the intention of landing the balls in grid locations set up to represent battleships
- Utilized Python to implement cooperative multitasking for remote operation of hardware including motors and encoders
- Integrated Proportional-Integral-Derivative (PID) controllers as a Python class to control motor position and speed

LEADERSHIP & MEMBERSHIP

Boeing Cal Poly Executive Focal Group

2023 - Present

Boeing Asian and Pacific Association (BAPA)

2023 - Present

PolyCultural Weekend (PCW) | Operations Committee Head (2022)

2020 - 2022

American Society of Mechanical Engineers (ASME) | Public Relations Director (2020-2021)

2020 - 2023