

Jonathan Goenadibrata

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SUMMARY

Robotics and automation engineer (M.Eng., UC Berkeley) with 3+ years at Apple building high-precision robotic test systems. Full-stack experience in motion planning (MoveIt2), PLC/CODESYS controls, and hardware prototyping. Seeking roles in robot integration, test automation, and controls.

EXPERIENCE

Robotic Data Collection Supervisor

Apr 2026 – Present

RoboForce

Milpitas, CA

- Led onboarding and training for a team of 6 teleoperators collecting robotic arm demonstration data for Vision-Language-Action (VLA) model training, authoring SOPs and test instructions adopted across the team.
- Optimized data collection scripts and redesigned the operator UI, increasing daily throughput by 60%.

Safety Test Automation Engineer

Aug 2021 – Jun 2024

Apple Inc.

Cupertino, CA

- Developed **automated robotic testing systems** for product safety certification, reducing end-to-end testing cycles from **75 days to 2 days** while achieving ± 0.1 mm positioning precision.
- Engineered a **contact-sensing end-effector** attachment to **eliminate undetectable system errors**, significantly **increasing test reliability by 30%**
- Developed a Python curve-fitting tool modeling test behavior across 2,700 configurations with **90% accuracy**, enabling engineers to predict cycle completion and plan next setup timing.
- Rapidly prototyped **3D-printed** test fixtures and **CNC-machined** components in **Siemens NX**, reducing **hardware setup time by 96%** through optimized design-for-manufacturing (DFM).

PROJECTS

Vacuum Chamber Controller | CODESYS, OptoScript, Structured Text, PLC

Oct 2025 – Nov 2025

- Led the migration to a modular **CODESYS Structured Text (IEC 61131-3)** OOP architecture for **multi-chamber vacuum sequencing** and safe-state control, improving system maintainability and scalability.
- Developed a modular node-edge pressure **simulation** that enabled virtual testing and reduced reliance on hardware debugging

Search & Rescue Robot | Python3, ROS 2, SLAM, RViz, OpenCV, Nav2

Aug 2024 – May 2025

- Led an autonomous ground robot for disaster response with **SLAM, A* path planning, and OpenCV** object detection for real-time mapping, localization, and perception.
- Integrated multi-sensor data streams (**LiDAR, camera, IMU**) for robust perception in dynamic environments.
- Owned project planning/timelines, mentored teammates in **ROS 2** workflows, and guided architecture decisions to the first deployment.

EDUCATION

University of California: Berkeley

Berkeley, CA

Master of Engineering in Mechanical Engineering: Control of Robotic and Autonomous Systems

May 2025

University of California: San Diego

San Diego, CA

Bachelor of Science in Mechanical Engineering with Specialization in Controls and Robotics

Jun 2021

TECHNICAL SKILLS

Programming & Software: Python, C++, MATLAB, ROS 2, Git, Linux, Arduino, PyTorch, Webots

Controls & Automation: PAC Control (OptoScript), CODESYS (Structured Text)

Mechanical & CAD Tools: SolidWorks, Siemens NX, Autodesk Inventor, 3D Printing, CNC, DFM

Robotics & Algorithms: SLAM, Path Finding (Nav2), Motion Planning (MoveIt2), Computer Vision (OpenCV), Sensor Fusion.