Muhammad Fadhil Ginting *Last Updated on 15th November 2019*

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Education

2018-Now	**Master of Science in Robotics, System, and Control** - ETH Zürich Gpa: 5.5/6.0 | Tutor: Prof. Margarita Chli
2013-2017	**Bachelor of Science in Electrical Engineering** - Bandung Institute of Technology Gpa: 3.94/4.00 | Advisor: Prof. Bambang Riyanto Trilaksono

Experience

Sep 2019 - Now — NASA Jet Propulsion Laboratory(JPL), Pasadena, CA, USA
Robotics Researcher, JPL Team for DARPA Subterranean Challenge

Investigating novel technologies on multi-robot autonomy and system integration engineered for rapid underground exploration.

Supervisor: Dr. Ali-akbar Agha-mohammadi

Highlights: *Multi-robot, Coverage Planning, SLAM, Reliable Communication System, Large Code Base Integration, Robot Simulation, DDS, ROS2, C++, Python.*

Mar 2019 - Sep — ETH Juniors, Zürich, Switzerland
Magic Leap Mixed Reality Developer

Lead a project for a world's leading dental company pioneering innovative Mixed Reality solution to assist dentist works.

Highlights: *Mixed Reality, Design Thinking, UI Design, Magic Leap, OpenCV, Unity, C#, C++.*

Feb 2019 - Aug — ETH Zürich, Zürich, Switzerland
Graduate Research Student, Autonomous System Laboratory(ASL)

Designing a learning-based method to perform visual localization and mapping using text-based landmark, and leveraging text descriptor with an existing localization method in place recognition task.

Supervisor: Dr. Cesar Dario Cadena

Highlights: *Deep Learning, SLAM, Tracking, Mapping, Computer Vision, Sensor Fusion, EKF, CUDA, TensorFlow, Python, C++, ROS.*

May 2017 - Aug 2018 — Bandung Institute of Technology, Bandung, Indonesia
Robotics Engineer, Advanced Robotics Research Laboratory

Developed navigation and guidance system for Autonomous Underwater Glider, and conducted sea testing.

Supervisor: Prof. Dr. Ir. Bambang Riyanto Trilaksono

Highlights: *Autonomous Underwater Vehicle(AUV), Sonar, IMU, Altimeter, Sensor Fusion, Path Planning, Hardware-in-the-loop (HIL) simulation, C++, ROS.*

Jun 2016 -Aug 2016 — CERN, Geneva, Switzerland
Summer Intern, CERN Summer Student Programme 2016

Devised a controlled high voltage module for Micro Pattern Gas Detectors(MPGD), wrote the report and presented the result to MPGD Collaboration.

Supervisor: Dr. Leszek Ropelewski

Highlights: *GEMs Detector, PCB Design, LabVIEW, HV Power Supply, Microcontroller, C++.*

Publications

1. **Ginting, M. F.**, et al."Hardware In the Loop Simulation Development of Guidance System for Autonomous Underwater Glider."*International Conference on Electrical Engineering and Informatics*, 2017.

Skills

Language	English(Proficient C1, IELTS 7.5/9.0) , German(Independent B1), Indonesian(Native)
Programming	C/C++, Python, MATLAB, Bash(Expert), Java, VHDL, C#(Proficient), SQL(Prior experience)
Software	Systems(Linux, Windows, ROS, Virtual Box), Tensorflow, Pytorch, CUDA, OpenCV, PCL, Eigen, LabVIEW, MPI, Eagle, Altium Designer, IDEs(Visual Studio, Unity, Android Studio)

Awards and Achievement

Present	Ministry of Finance of Indonesia - Awardee of LPDP Education Scholarship(CHF 59,000)
2017	McKinsey Young Leader for Indonesia 2016 - Top 10 graduates(USD 1,000)
2015	ABU Robocon(Asia Pacific Broadcasting Union Robot Contest) - 2nd Runner Up

Social Activities

2017	*Project Lead*, Assesment Center Project - McKinsey Young Leader for Indonesia
2016	*Chairman*, University Student Robotics Team
2015	*Senior Staff of Character Development Division*, Electrical Engineering Student Association

Hobbies: Tennis, Travelling, Photography

Master of Science in Robotics, System and Control

Grades

Exam	Grade	Credit Hrs
3D Vision	5.75/6	4
Perception and Learning for Robotics	5.75/6	4
System Identification	6/6	4
Robot Dynamics	5.75/6	4
Probabilistic Artificial Intelligence	5.75/6	4
Computer Vision	5.25/6	6
Self-Organizing Multi-Agent Systems	5.75/6	3
Programming for Robotics	6/6	1