Dionesius **Agung**

Software Engineer · Robotics Engineer

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Summary

A student currently pursuing a bachelor's degree in computer science from Institut Teknologi Bandung with high interests in robotics and AI, mainly focused in computer vision, perception, and state estimation. A proactive person who is eager to learn new things and has good communication skills. An aspiring engineer currently looking for internship opportunity as robotics intern.

Education

Institut Teknologi Bandung

Bandung, Indonesia

Bachelor of Engineering, Computer Science (GPA 3.xx/4.00) — *Aug 2016 - Jul 2020 (expected)*

- Currently doing final assignment about autonomous navigation and control for simultaneous localization and mapping on mobile robots.
- Is currently active in a robotics team focusing on mobile robots, doing research and software implementations.

Skills

Programming	Python, C++, Golang, Javascript, Node.js, express
Systems and Tools	ROS (Robot Operating System), Unix Operating Systems, OpenCV Library
Human Languages	Indonesian (native), English (bilingual/native proficiency)

Experiences

Shopee Internasional Indonesia

Jakarta, Indonesia

Software Engineer Intern — *May 2019 - Aug 2019*

- Implemented back end handler component that deals with high number of requests per second.
- Created feature release manager to enable independent and individual releases of features for different countries.

Dagozilla ITB Robotics

Bandung, Indonesia

Lead Programmer — *Sept 2018 - Sept 2019*

- Generally directed the research and development on computer vision, robotic system controls, robot AI, and software UI/UX.
- Designed and implemented AI for goalkeeper robot behavior and decision making.
- Researched and implemented algorithm for robot state (position) estimation using adaptive particle filter.

Programmer — *Sept 2017 - Sept 2018*

- Designed architecture for computer vision system software for football-playing robots that compete in Indonesian MSL.
- Made object (ball, obstacle, and field) detection for MSL robots using OpenCV library.
- Did research on odometry and IMU sensor fusion using Extended Kalman Filter.

Projects

Mobile Telepresence Robot

Robotics

A mobile telepresence robot that can be controlled remotely via the internet used for teleconference — *2018*

- Developed the robot software including the middleware and control with Robot Operating System.
- Programmed the microcontroller (STM32 Nucleo F446RE).
- Created video chat software for the robot-mounted and user-facing applications using WebRTC.

Peer-to-Peer Collaborative Editor

Distributed System

A simpler and plainer version of Google Docs — *2019*

- Created peer-to-peer collaborative text editor (simpler replica of Google Docs) utilizing CRDT.
- Built the graphical user interface with Qt.

Awards

2019	**4th Place**, KRSBI Beroda, Kontes Robot Indonesia Nasional (National league of Indonesian Robocup MSL)	*Indonesia*
2019	**1st Place**, KRSBI Beroda, Kontes Robot Indonesia Regional 2 (Regional league of Indonesian Robocup MSL)	*Indonesia*
2019	**Best Strategy**, KRSBI Beroda, Kontes Robot Indonesia Regional 2	*Indonesia*
2018	**Best Strategy**, KRSBI Beroda, Kontes Robot Indonesia Regional 2	*Indonesia*