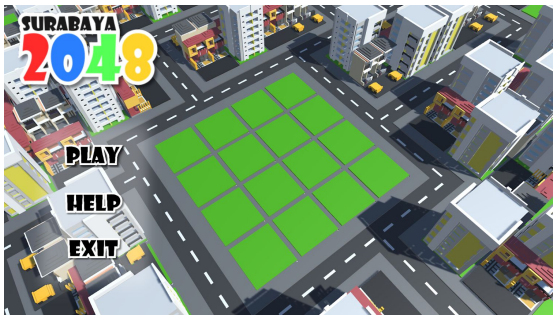
Address: B201 Lab, ITS Campus, Keputih, Sukolilo
Surabaya City, East Java, Indonesia 60117
Mobile: (+62) 89 696 664 088
Email: alfi.maulana.f@gmail.com
Website: threeal.gitlab.io

Muhammad Alfi Maulana Fikri



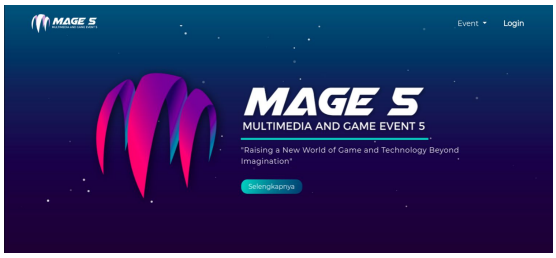
Surabaya 2048 — *Game Project*

http://ichiro.its.ac.id/

Surabaya 2048 is a puzzle game, inspired by the 2048 game, with Surabaya landmarks as the numbered blocks. I developed this game with my friend as part of the task to become the B201 Lab's assistant.

Just like the 2048 game, the main task of this game is to merge blocks with the same type so it would be upgraded to the higher type and reach the highest score as high as possible while we could still move the blocks. This game also features many landmarks of Surabaya in voxel design like Heroes Monument, Bungkul Park, Suramadu Bridge, etc.

This game was built using the Unity game engine. I simply just do the programming part like making the game system, user interfaces, and score systems, While my friend designs the landmarks models. The game itself was done in just 2 weeks, as the game itself is simple and does not require much coding.

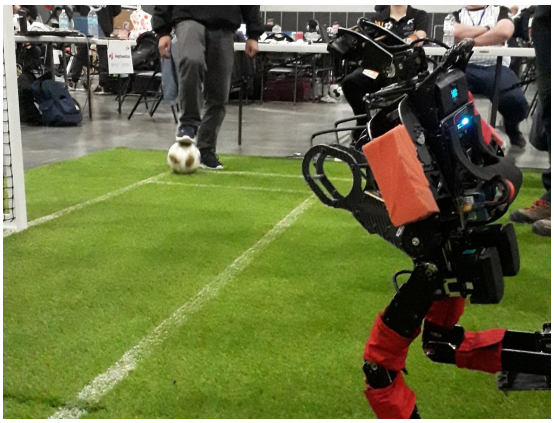


MAGE 5 Website — *Website Project*

https://www.instagram.com/mage_its

MAGE 5, also known as Multimedia and Game Event 5, is a Computer's Engineering event that consists of competition in App/Game Developing, E-Sport, Talkshow, etc. The website itself is mainly used for both event information and dashboard site for both admins and users.

In this project, I do not handle much in the programming side. Instead, I lead the



Humanoid Robot — *Robotics Project*

https://gitlab.com/threeal/surabaya-2048

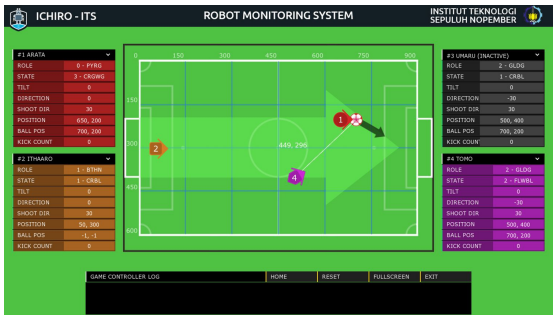
Humanoid Robot is the main project of the Ichiro ITS robotics team. There are 2 kinds of robots in this project, the first one called Arata which plays in the kid-size category, and the second one called Ithaaro which plays in the teen-size category. But aside from the difference in which category the robot played, both robots were built using the same electronics components and ran using the same programs.

We use the robots mainly to compete in RoboCup that is held by the RoboCup Federation and FIRA RoboWorld Cup that is held by the Federation of International Robot-soccer Association. Both competitions have the same objective to make humanoid robots from around the world compete and complete challenges in athletics like soccer, sprint, weightlifting, etc.

In this project, I and other programmers in my team are challenged to create a program for the robots such that it could complete challenges as fast and as accurately as possible. To accomplish those challenges, we need to develop many things in the robot's program, including developing an object detection system so the robots could detect balls and obstacles in the field, Developing a walking control system so the robot could walk smoothly without slipping and falling, etc.

other programmer to create a website that could accommodate the needs of this event from the backend side to the frontend side. The website itself was mainly built using the Laravel framework that handles the server-side of the website.

This website was active from June to December 2019. But sadly the event was already ended and the website already closed, but I could give more detail of this project from the official Instagram account of this event.



Robot Monitoring System - *Software Project*

https://gitlab.com/ichiro-its/robot-monitor

Robot Monitoring System is a monitoring software that is used to aid the debugging process of the Ichiro ITS robotics team humanoid robot's programs. In the humanoid robot competition, especially the soccer competition, multiple robots need to communicate with each other and collaborate in the field to score the goal. That is why this software is created to aid the debugging process of that collaboration part of the program.

This software works by capturing UDP packets sent by each robot that tells the state, position, and direction of the robot. This software was developed using C++ with OpenFrameworks for the graphical user interfaces and networking framework. This software was done in less than a month and considered easy to be made as the software just needed to capture the data sent by each robot and display it to the screen.

Golden Age: Nusantara – *Game Project*

https://youtu.be/DtCA1IVWjrs

Golden Age: Nusantara is a turn-based strategy game inspired by indie game Predynastic Egypt with some Civilization Series elements like hex-based tiles and technology tree system. The main objective of this game is to develop a newly created Majapahit capital city of Trowulan and spread the Majapahit sphere of influence across Nusantara either by trade or invasion.

This game was developed with two of my friends as part to compete in a game development competition that was held by Multimedia and Game Event 2018. In this project, I handle all the programming side from developing the game system to developing the player interaction with the game, while two of my friends create the assets like 3d models and user interface designs.

This project could be considered hard and complex because aside from just creating a game design that already exists previously, we need to develop a game with a fresh design while making sure it is still fun to be played. Also, because this game at the end will be deployed to the mobile platform, we were challenged to optimize this game so it could still be played on all kinds of smartphone platforms, from low tier to the high tier.