

Sungwook Kim

I started to computer programming with my 268 PC in 1991. Since that day the computer programming became my friend and play. I'm very interested in to study new computer technologies that I didn't know. It makes me so happy that lots of people use the *ARTWORK* I created.

I think that the duty of computer programmer is to make the world more convinient and happier than now. That's why I do this.

Education



Hanyang University

Bachelor of Computer Science • 2003 – 2010

I have always enjoyed programming and I naturally graduated to computer engineering department. I already had studied by myself about most of the lectures before entrance into university. So I've got academic scholarships several times and graduated without difficulty.

Professional Experience

SNOW corp.

*Developer • May, 2017 –
Now*



My department of LINE+ was merged with SNOW.

LINE+ corp.

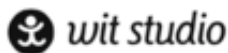
Developer • Aug, 2014 – Apr, 2017



LINE+ corp that is subsidiary company of NAVER has taken over Wit Studio.

Wit studio

*Co-Founder / Development
Manager • Nov, 2012 – Jly, 2014*



This is the startup I founded with my two friends. [\[Article\]](#)

Samsung Electronics corp.

Software Developer (S3) • Jan, 2010 – Oct, 2012



I experienced lots of things about development process at Media Solution Center in Samsung that is my first company. However no matter how hard I had tried, I never got a chance to do creative things.

Skills

Programming Languages

C/C++, C#/WPF, Java, PHP, Python, javascript, HTML, MFC, NASM, MASM32, O-Caml, Swift, Objective-C, etc

OS & Frameworks

CentOS, Mono, Laravel, Django, Phalcon, Android, macOS, Tensorflow, etc

Databases

MySQL, SQLite, MSSQL, Redis, MongoDB

Abilities

Kubernetes, Deep-Learning, System Infra Construction & Management, Service Architecture Building, Reverse Engineering, System Security, Networking, Web Development, PC Software Development, Mobile App Development and Anything you want.

Social Links

- **Github:** <https://github.com/und3rs>
 - **Website:** <http://crystalcube.co.kr>
-

Professional Projects

Zepeto Open API

SNOW corp.

Mar, 2019 - Now

Zepeto is a 3D avatar App that is very popular globally. Many 3rd party applications wants to use contents and functions of Zepeto. So we need to make 3D Rendering API service that provides avatar images with headless GPU machines.

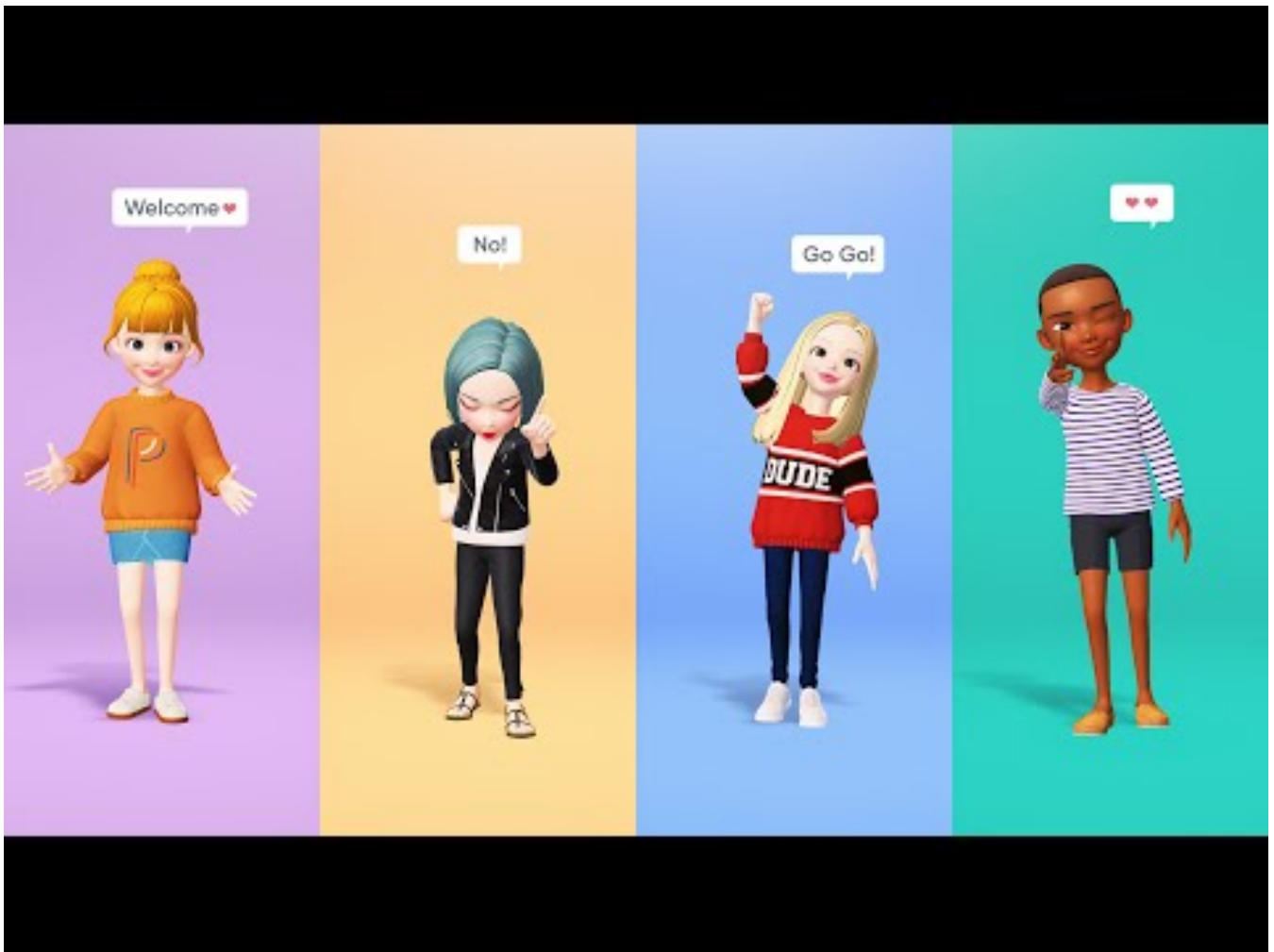
I'm building some clusters in several regions with kubernetes and making a system architecture for to use GPU servers efficiently by myself.

- *Kubernetes, Docker, CentOS, Unity, Python, Redis, Django, HA*

Zepeto Service

SNOW corp.

Jan, 2019 - Feb, 2019



The Zepeto is a globally popular App that generates a 3D avatar look the same as a user. Zepeto has achieved above 20 million downloads.

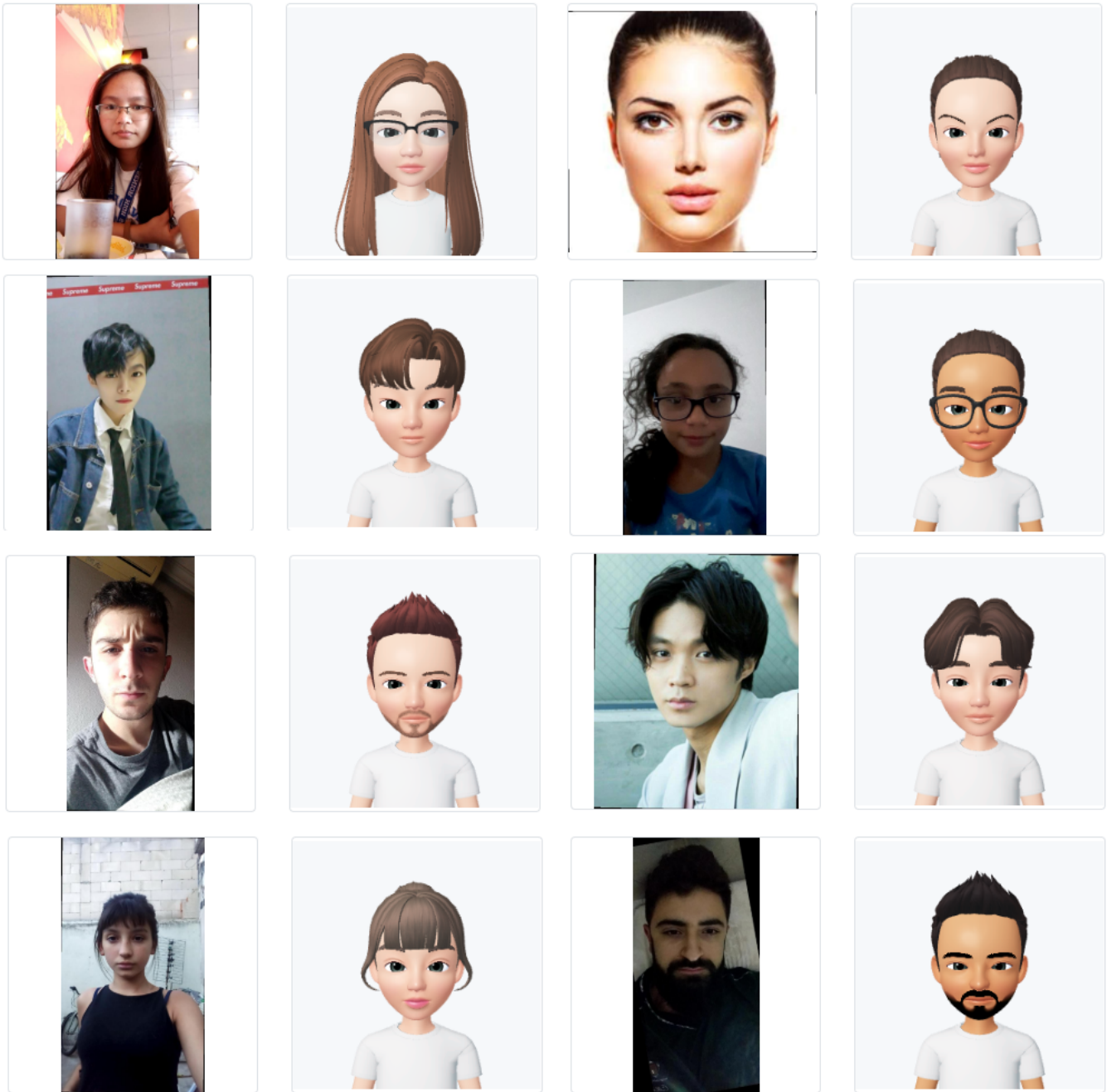
Developed some functions such as daily quests, scratch games, Wechat payment, detecting illegal users, migration system for chinese users and so on.

- *NodeJS, MongoDB, Redis, GameSparks*

Zepeto Brain (AI)

SNOW corp.

Dec, 2017 - Dec, 2018



The Zepeto generates the pretty 3D human avatar that looks like a user from a single image.

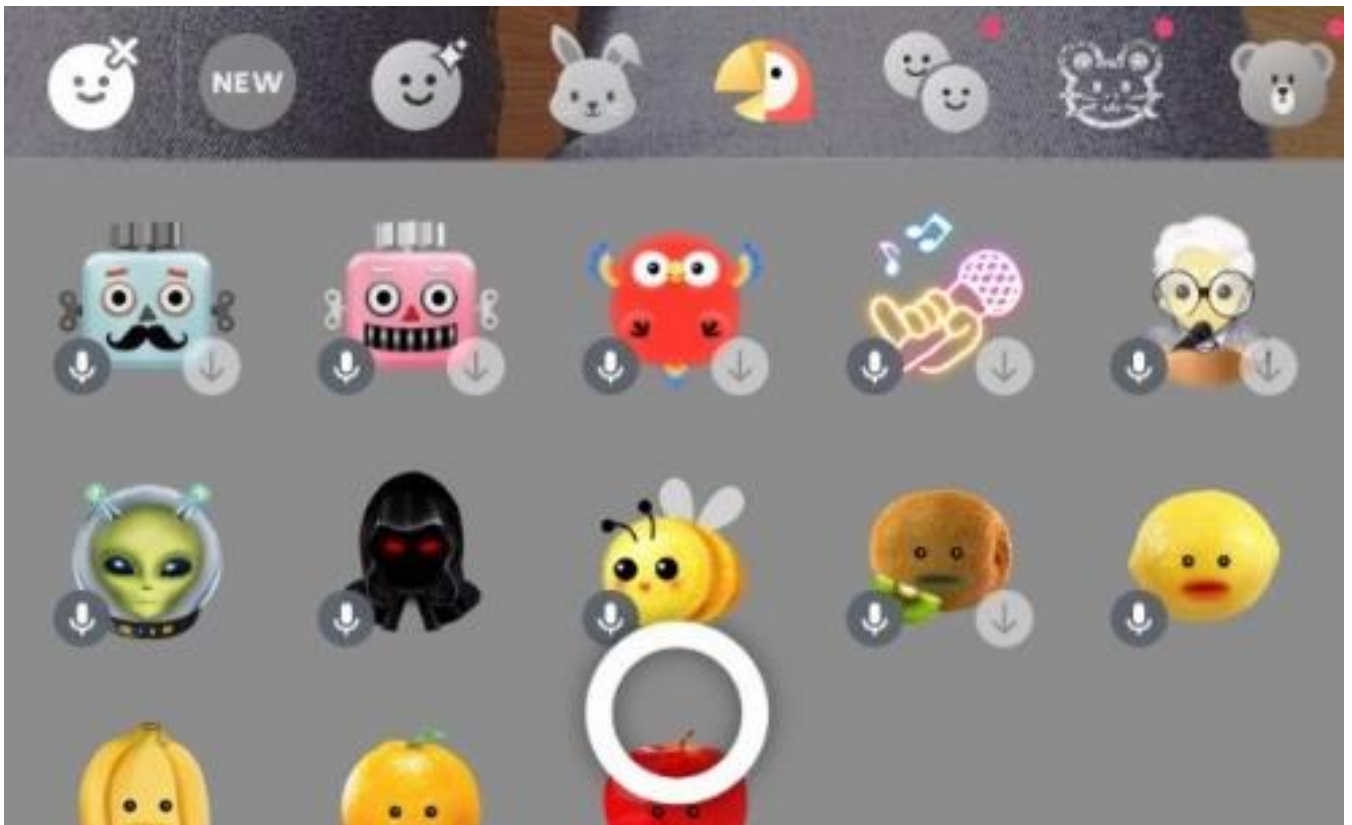
Developed AI that makes 3D human avatar from a single image with deep learning by myself. More specifically, I did the things are collecting and labeling images, building neural network, lots of testing and learning, code stuff for training, building and managing 8 clusters in several regions, making REST API server and so on. I did all of this project by myself. It was too difficult making avatar looks like a user and beautiful at the same time.

• *Tensorflow, Python, Kubernetes, Redis, HA, Alibaba Cloud, *Tenacity**

Voice Changer Engine (Parfait)

LINE+ corp.

Oct, 2017 — Nov, 2017



The Parfait is a Voice Changer Engine based on DSP(Digital Signal Processing) written in C++. This engine is including over 22 DSP filters such as Fuzz, Distortion, Harmonic. SNOW App and B612 App are using this engine for to change voice sound.

Developed the engine for iOS/Android and App for a voice sound filter producer without any co-workers.

- *DSP, C++, Android*

PORTRA Camera App.

SNOW corp.

Feb, 2017 - Sep, 2017



PRORTA is a camera App providing lots of effect filters.

I was a one of the programers who made filters with pixel shader via Lua script.

- *OpenGL Pixel shader, Lua Script*

LINE Friends Store renew

LINE+ corp.

Sep, 2016 — Jan, 2017

The payment system of this store has been pretty slow so needed renew.

I did renew the website using wordpress with a coworker.

- *wordpress/woocommerce, Redis, MySQL, nginx, php*

egg Camera App.

LINE+ corp.

Jan, 2016 — Aug, 2016



The egg is a camera App such as B612 and SNOW App.

Developed App for android and ios without any others.

- *Android*

LINE Creators

LINE+ corp.

Oct, 2015 — Dec, 2015

Line creators is a portal for not only to assist users in creating stickers but also to sale sticker.

I did development and building service infra such as Rest API, Redis, Sphinx, MySQL. Additionally I handled lots of problems about security and API services. I used Sphinx engine to search stickers fastly.

- *ASP, MSSQL, CentOS, PHP, MySQL, Sphinx, Security, HA, Redis*

Coloring Book App.

LINE+ corp.

Aug, 2015 — Sep, 2015

This is a prototype project.

Developed with a designer. It didn't be published.

- *Android, Javascript, SVG*

Toon Chat App.

LINE+ corp.

Mar, 2015 — Jly, 2015

Toon Chat App is a messenger that shows messages looks like a comic book. This is a prototype project and not be published.

Developed android App and service server.

- *Android, MySQL, Rest API, PHP*

Shot 44.3

LINE+ corp.

Nov, 2014 — Feb, 2015

The shot 44.3 is a simplest messenger App. User only can send a image as a message without text. This project is a prototype and not be published.

Developed android App.

- *Android*

Design Resource Archiving Web

LINE+ corp.

Aug, 2014 — Sep, 2014

It is a company-specific project that was commissioned by the design team. Designers were randomly storing their resources in public storage. We needed a site that could tag, search, and see the full list with thumbnail image anywhere.

Developed a parser of *.psd(Adobe photoshop file format) and a extractor for resources meta data.

• *web, C#, Resource Meta Extracting, Javascript*

Syncor

wit studio

Feb, 2014 — May, 2014



Syncor is a desktop application that streams a desktop screen as APNG. This allows the client to view the streamed screen without a special program.

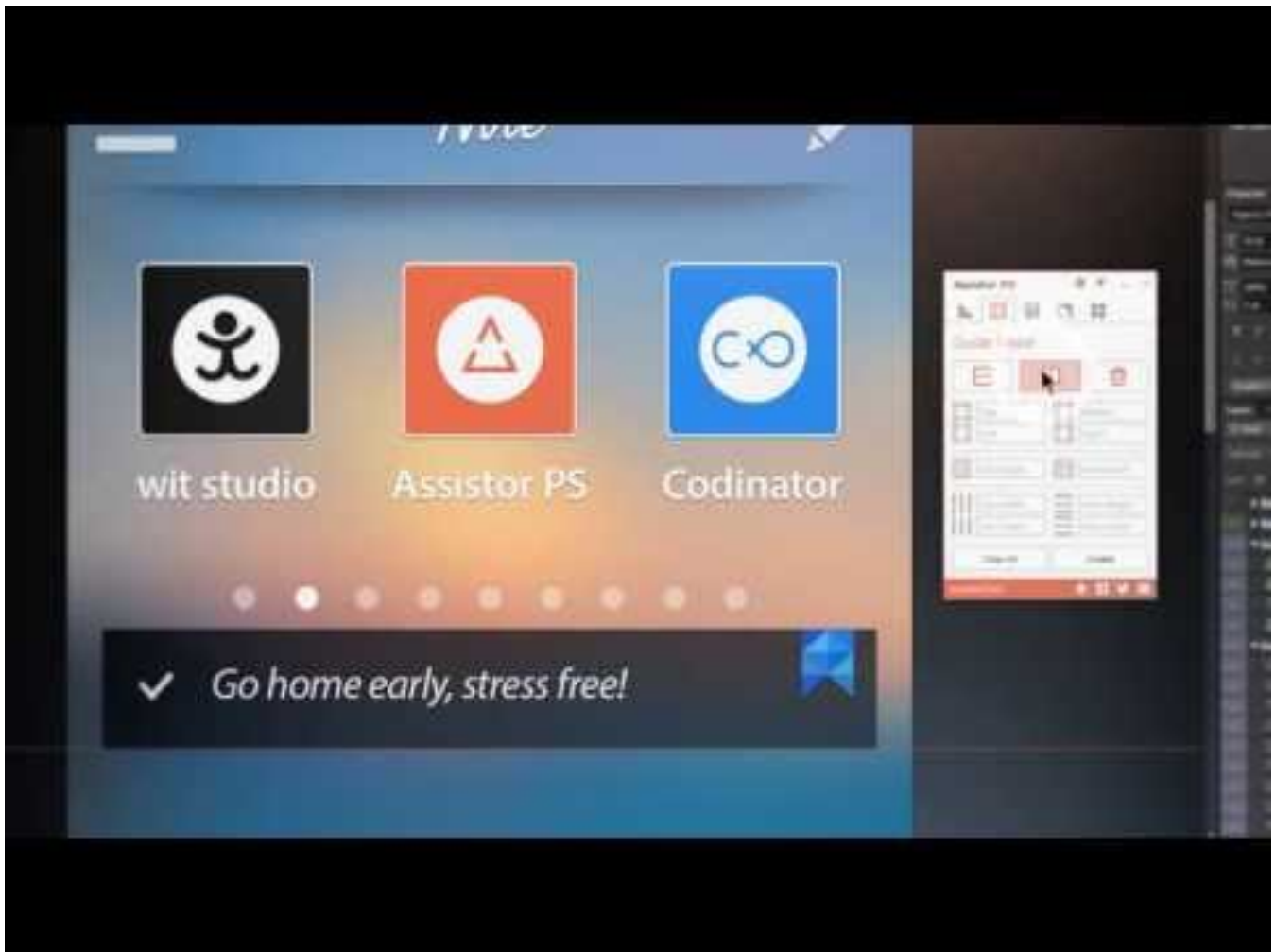
Once I went to the LG Hynix company for a meeting. There was a situation where we could not launch our presentations due to the infrastructure problems there. At this time, I thought that I would like to have a program that can stream the screen easily. I developed all of this with a designer.

• *WPF, C#, aPNG*

Assistor PS

wit studio

Mar, 2013 — Jan, 2014



Assistor PS is a desktop program designed to help designers comfortably use things that are often used in Photoshop.

I developed some features in component units. And I've developed a store for sale.

• C#, MS Azure, Apache, ASP.NET, Paygate, MS-SQL

Grappic App

wit studio

Jan, 2013 — Feb, 2013



Designers refer to a number of references to design apps. Grappic is an app for designers that organizes the design of all the apps registered in the app store.

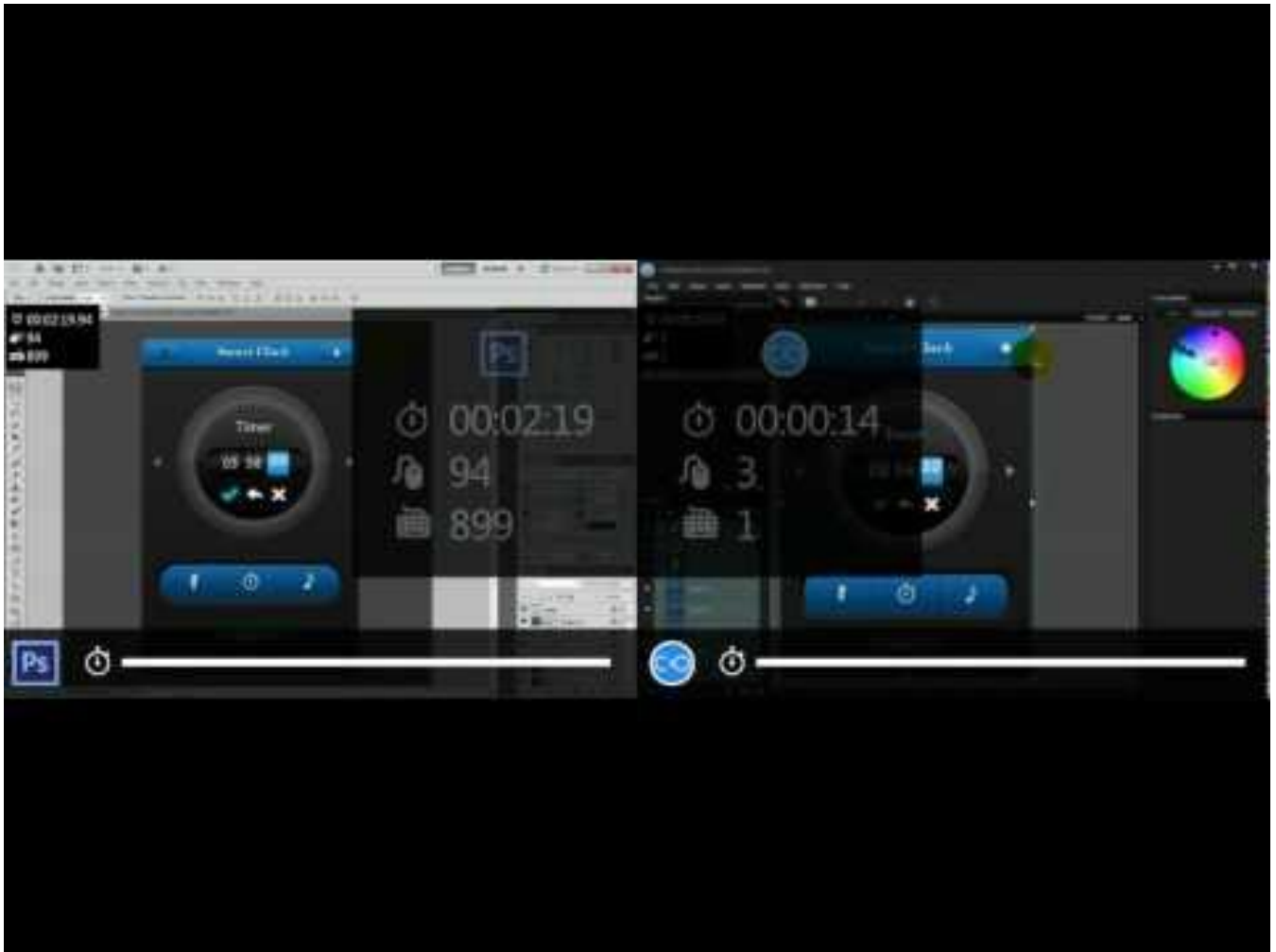
I developed iOS and Android apps by myself using Xamarin. And I developed the server and Rest API.

- *Xamarin Studio(Mono Develop), C#, MySQL, CentOS, Apache*

Codinator 2.0

wit studio

Nov, 2012 – Dec, 2012



Coordinator is a graphical program with UI similar to Adobe Photoshop. However, it takes a lot of effort to develop various UI with Photoshop. And it's not easy to do the modifications. The coordinator is a designer program that can compensate for these shortcomings.

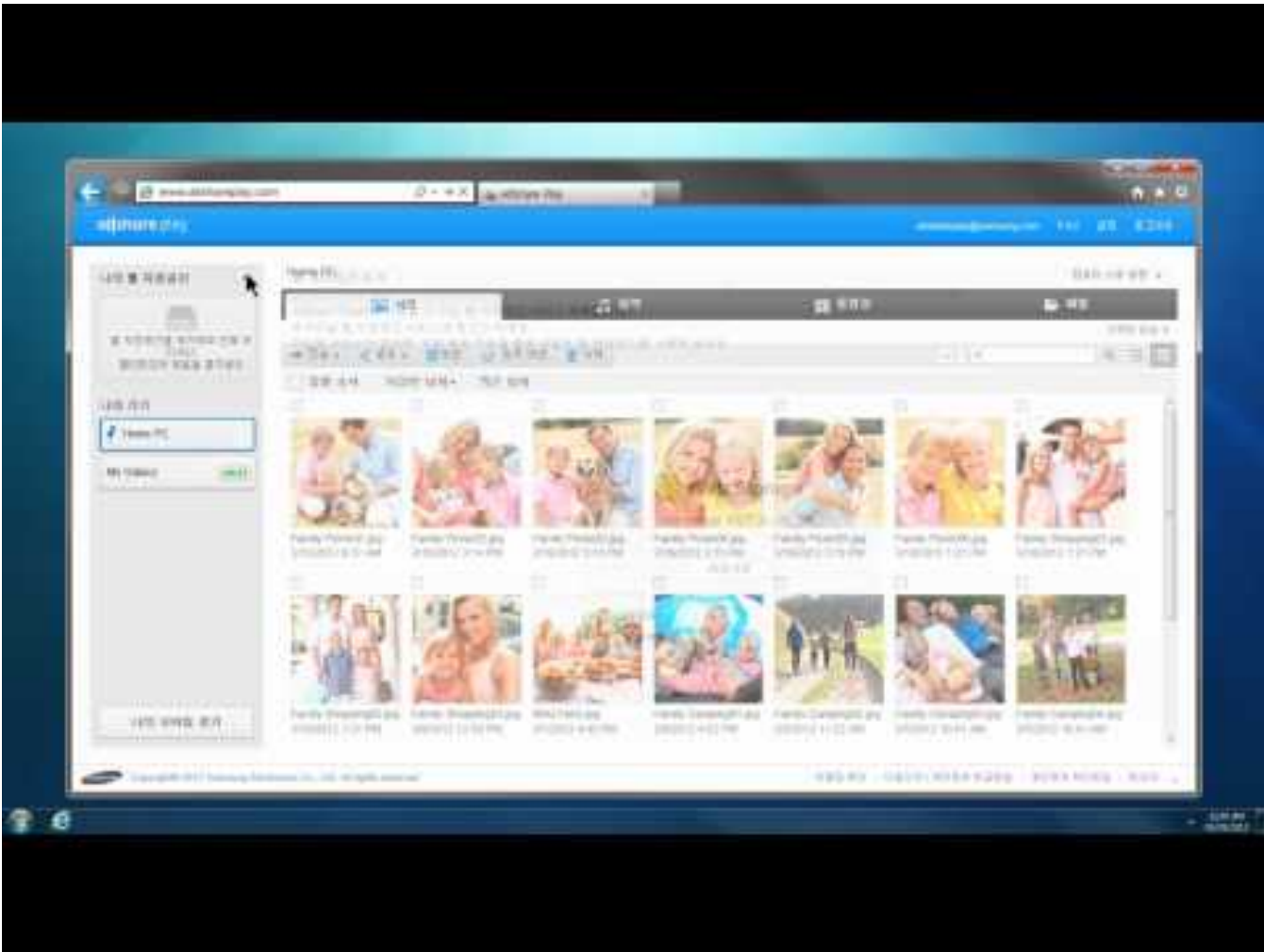
I was in charge of some of the UI and I developed a photoshop file (.psd) parser with javascript.

- WPF, C#, Javascript, Photoshop *.psd Spec

AllShare Play

Samsung Electronics MSC

Oct, 2011 – Oct, 2012



Cloud version of AllShare, which is available on other networks than the same network.

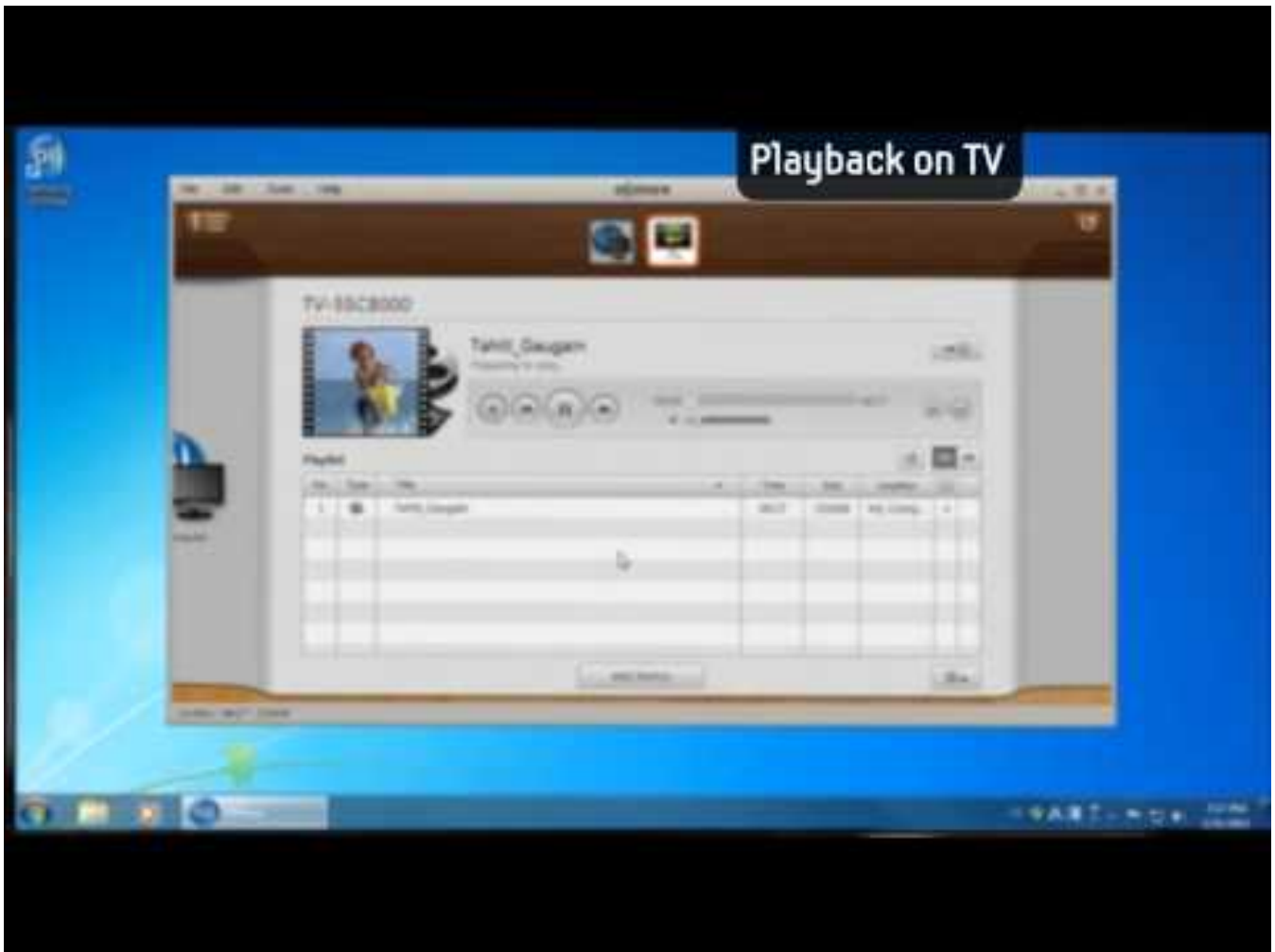
I was dedicated to developing a library that extracts meta information from various media. And I develeoped a MacOS version of this.

- WPF, UPnP (DLNA), C#, Java, OSX, MFC/C++

AllShare PC SW

Samsung Electronics MSC

Dec, 2010 – Sep, 2011



This is PC software that has all the DMC, DMS, and DMP functions of DLNA.

At that time, we used the DLNA stack made by the research institute. There were so many problems that I re-developed the DLNA stack by ourselves. This stack is still being used by Samsung as I know. Except for UI, I dedicated the development of DLNA Engine and Library.

- WPF, UPnP (DLNA), C#, Java

KIES PC software

Samsung Electronics MSC

Jan, 2010 – Nov, 2010

KIES is an integrated program that provides many functions related to mobile phones, including DLNA, such as photo, video editing, and copying files between cell phones and PC.

I maintained functions related to DLNA.

- WPF, UPnP (DLNA), C#

Homepage

wit studio

Nov, 2009 – Dec, 2009

Before the establishment of the corporation, I built a team with three acquaintances.

Developed website of witstudio.

- html, javascript, MySQL, CentOS

Korean Association of Newspapers Management System (NWFMS)

Korean Association of Newspapers

Nov, 2009 – Dec, 2009

This is an outsourced project. We re-created an administrator program that had been implemented with the existing Visual C++ into the WPF. This program is used internally by the Newspaper Association.

I worked with one other developer to develop UI and bind data.

- WPF, C#

SIMS (Samsung Injector Monitoring System)

Samsung Manufacturing Technology Center

Aug, 2009 – Dec, 2009

SMIS is a monitoring system that receives information from DB and displays it in tables, charts, and graphs.

I developed a module that shows data in charts and tables.

- WPF, C#, MSSQL

Ambient Wall

Samsung Advanced Institute of Technology

Apr, 2009 – Jun, 2009

Through the membership of Samsung software, I was able to do this project. Ambient Wall is a 2009 Samsung Technology Exhibition project. As a future home space, one wall has a screen. You can make a video call or view weather information or maps on this screen. All control is possible through motion recognition.

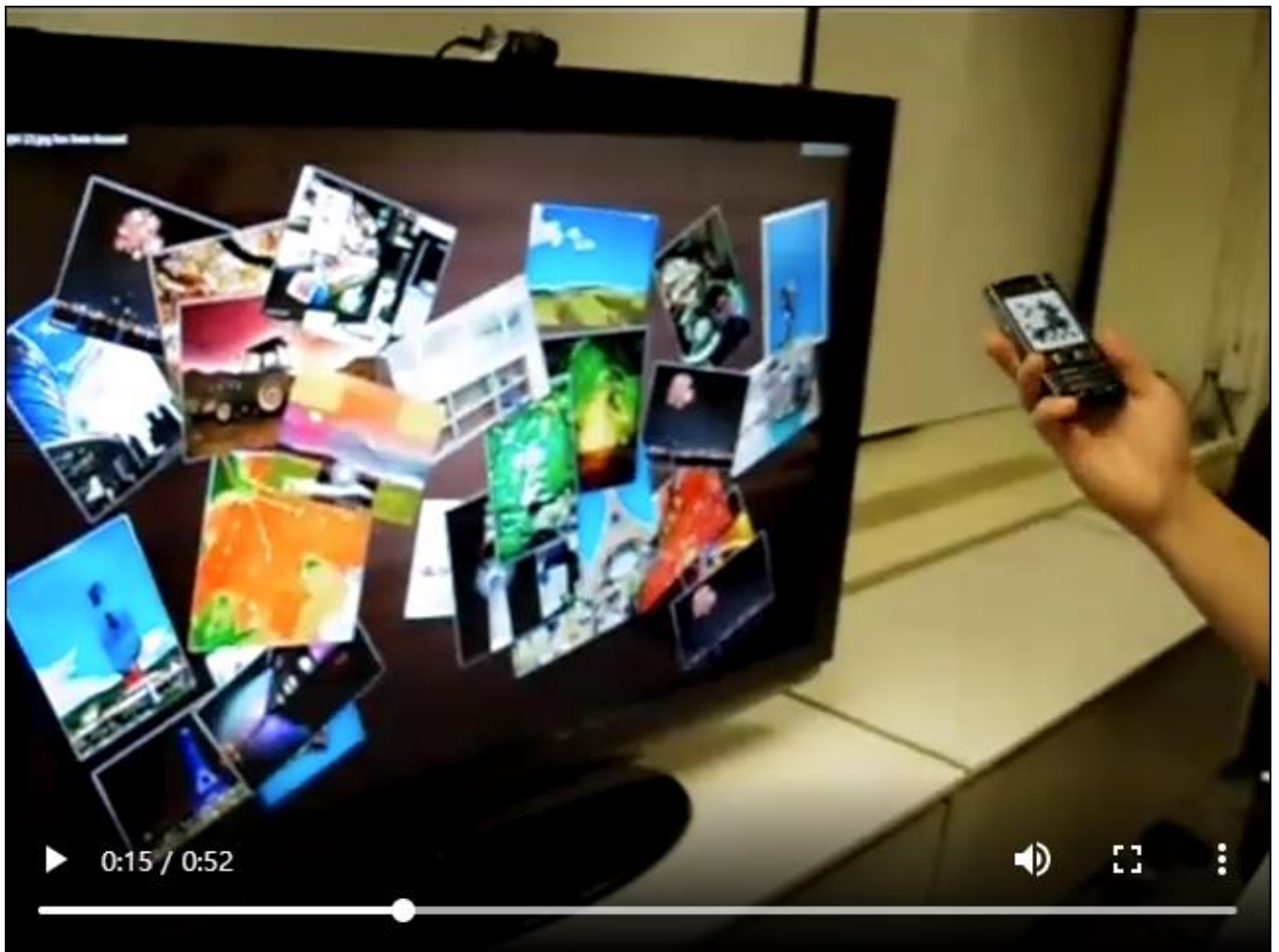
I was responsible for controlling and showing the map with motion information.

- C#, WPF

Surface TableTop

Samsung Advanced Institute of Technology

Jun, 2008 – Sep, 2008



Through the membership of Samsung software, I was able to do this project. Tabletop is a 2008 Samsung Technology Exhibition project that developed contents for desktop computers.

I developed an app and a desktop server that send and receive files using QR-Code. And I developed a function that expresses the beat of music with a vibrator called Shacker.

- Windows Mobile, .NET, Bluetooth

Renew the homepage of Culture Center

Gunpo City in Gyeonggi-do**Nov, 2008 – Dec, 2008**

It was a project that ported the homepage of ASP to PHP.

I did it alone in part-time.

- ASP, PHP

Homepage**SonusEnt corp.****Sep, 2007 – Dec, 2007**

It is a web site of SonusEnt corp.

It's a solo project. I personally hired a designer on a part-time basis. We created a company web site and a CMS page for management.

- html, javascript, ajax, MySQL

Shopping site**Hanyang University****Jun, 2006 – Jly, 2006**

This project was carried out through cooperation between the Make Shop, an Internet shopping mall construction company, and Hanyang University.

I built a shopping mall using a make shop with a my friend.

- html, javascript, Makeshop

Personal Projects**Smart Caz****Apr, 2014 – Now**

This is an app for vehicle management. At the time of development, there was no app that I wanted. I felt the need for this, so I developed it myself. It wasn't easy time to go to work and develop alone. This app is currently registered in the store. Image resource work was commissioned by the designer a month before the release in part-time format.

- Android, Google Firebase, CentOS, MySQL, Redis, REST API, Phalcon, PHP

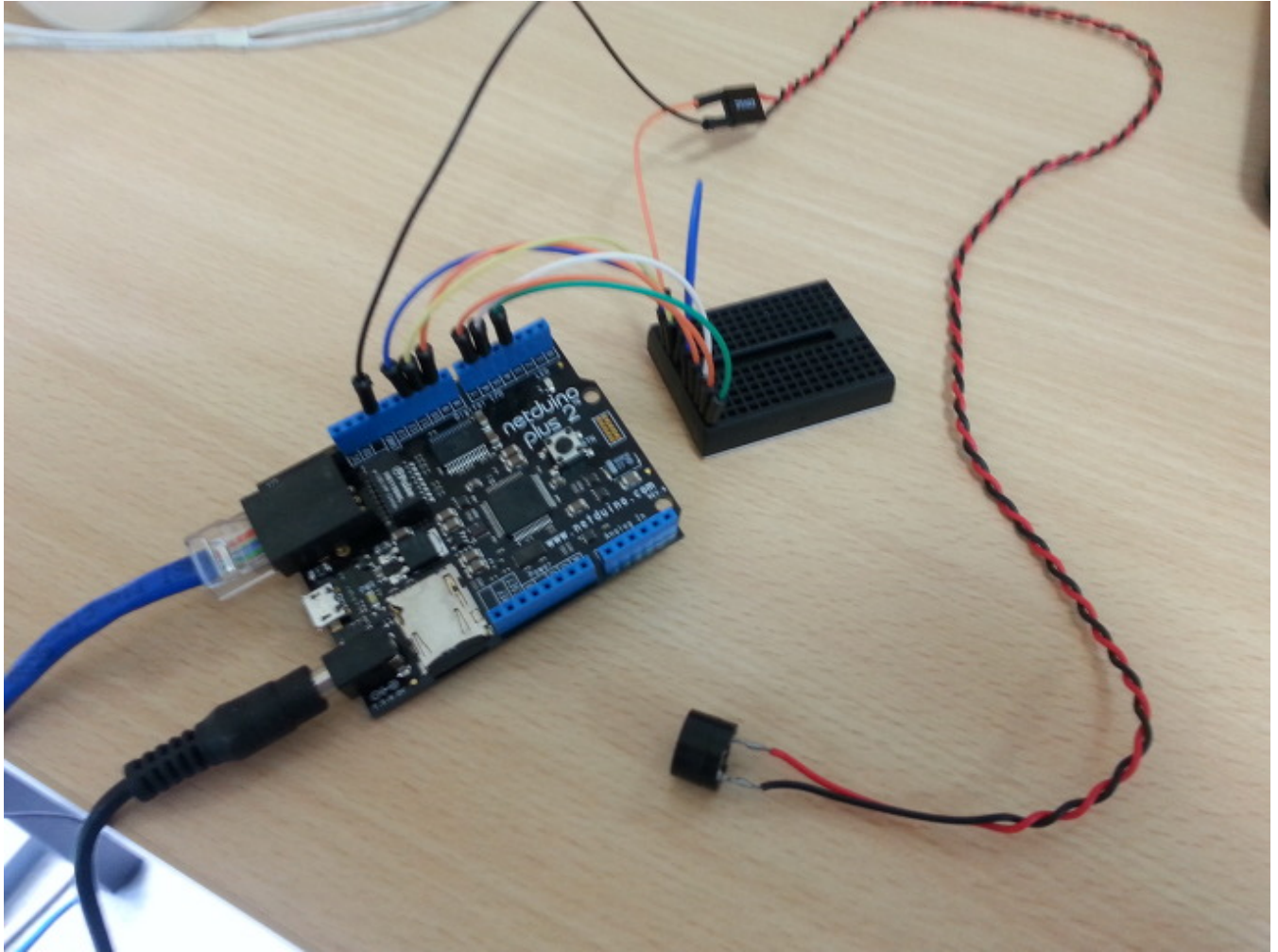
OTG Reverse Engineering**Apr, 2018**

I had purchased some academic videos were provided in OTG format. So when I saw the video, I had to plug the OTG into my cell phone every time. It was too uncomfortable so I made a Fake OTG in reverse engineering so that I can see a video in a cell phone without OTG.

- Android, smali

Digital Alarm with Netduino

May, 2014



I have been interested in hardware since I was in elementary school. I happened to know a board called Netduino, and I created an alarm that I could control online. In addition, I've tried to make things like USB Mass Storage with Netduino.

- .NET Micro Framework, Netduino

Game BOT

2012

When the "모두의 게임" was in vogue, I made a BOT with C# for fun to get high scores. I usually enjoy programming something like this for fun.

- C#

PC Remote Controller with Wii Remote

Jul, 2012

I usually watching movies on the computer at home. Sometimes, when I watch a movie, I have to operate a computer, and it was very inconvenient to go closely to the computer and controll it. As I happen to have a Wiimote controller at home, I made a remote control for PC using Bluetooth.

- Bluetooth, C#

3D Virtual Trip

Sep, 2008 – Aug, 2009

This was a college graduation portfolio. As you can see from the name Virtual Trip, it's a program that makes virtual travel. Like the current Google Street view, I created 3D space with WPF. This image is output via the Head Mounted Display (HMD) to give you a sense of reality. And I made a triangular arrangement of instruments using three IR LED. This light is read through the IR receiver of Nintendo Wii to get location information for three points. The value analysis detects changes in Yaw, Pitch, and Roll. I apply this change to the 3D space, and it gives us the illusion that it's actually

there. And then, by attaching a gastromot to the legs, I realized that I was walking, so that I could move a virtual distance. Now there are many VR devices like Oculus, but the first time I started this project was in 2008 and I thought creatively that I did it. In order to track the movement of the head more accurately, I changed the tracking method from IR sensor to gyro sensor.

- WPF, C#, HardWare, Bluetooth

Handover Network Driver

Mar, 2008 - Jun, 2008

This project was conducted while I was in Samsung software membership. If you switch to Wi-Fi to move a wired LAN to a laptop, the connection will be lost. In this case, a HandOver driver was developed to ensure uninterrupted communication of the network.

- NDIS, Windows mini-port driver, C/C++

Memorize Game

Jun, 2008

This is a simple game made using ocaml. It's a kind of memorize game where you memorize the random sequence of buttons that your computer presses, and you press them the same order.

- ocaml

Realtime GPS shuttle tracking system

Jun, 2008 - Nov, 2008

This project is similar to the current bus location tracking app. It was a project in 2008, and it didn't have this concept at the time. Connect a USB-type GPS serial module and WiBro to your laptop and send location information from GPS to the main server. Google Maps will place a marker on that location so that the recipient can know the location in real time. Later I took part in exhibition in the school and received a business proposal from a professor of transportation engineering.

- C#, Ajax/Javascript, MySQL, GPS(wgs84)

Reverse Engineering

Apr, 2005

I did reverse engineering something at the request of an acquaintance.

- Assembly/Decompile, OllyDbg

Activites

Mensa Korea

Member

Apr, 2016 -

I was interested in start-up in 2016. I applied to Mensa Korea because I thought interacting with other smart people would be good for finding a founding member. But it's a little different from what I thought, so I haven't done anything since I became a member.

Jaram academy in Hanyang Univ.

Member

2003 - now

Jaram was created in 1985 and is currently active at Hanyang University. I started my membership activities in 2003 and I am still active in many ways for my juniors.

Samsung Software Membership

member of 18-2

Dec, 2007 - Feb, 2010

Samsung Electronics Software Membership is a group operated by Samsung Electronics. I have been a member of 18-2 for about 2 years. During this period, I worked on various projects at Samsung Advanced Institute of Technology and Samsung Manufacturing Technology Center.

Studio Wave corp.

Internship

Jan, 2009 - Feb, 2009



At the invitation of Digital Media High School of Korea, I gave a lecture titled "Efforts to Be a Good Developer."

Alt-Language Festival (PNA 2007)

Operator

Mar, 2007 — Jun, 2007

The Alternative Language Festival is a conference to share information on the 'alternative language' led by Kim Chang-joon, who is famous for Agile. I was very interested in alternative languages, so I worked as a preparatory committee in 2007. Unfortunately, it was canceled during the preparation period.

Reverse Engineering Team

Operator

Feb, 2005 — Dec, 2006

While serving in the military, there was a reverse engineering team at Intranet of 101 Communication Brigade. As a management team, I did online activities to create and solve quizzes.