

# Maker Instructional Design for Next Generation

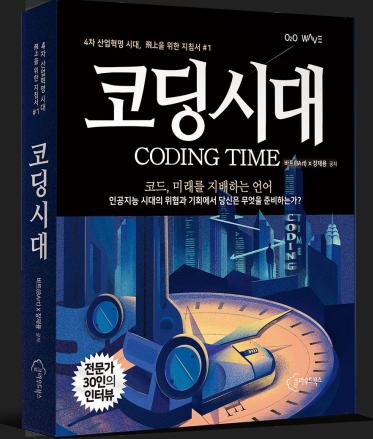
장재용

Nov 26, 2020

GEN (prev. LTLABS)

# My History

- GEN 대표
- 자연어처리 기술 컨설턴트
- 웹서버 관리자
- 특허 기술번역
- 케냐, 말라위\*
- 고려대학교



The purpose of my research is to **study of learning effect and satisfaction degree from maker education of e-learning** not like conventionally learning at the school class.

Many people consider the Maker education instruction should be implemented at the physical spaces like the makerspace or fablab. By the way we see some cases are open online tutoring or class for Maker education under COVID-19 situation. But it's not systematically organized.

Using TinkerCAD, I will offer 3D printing Maker Education. Not only 3D modeling and printing, I want to make more studies of IoT and others using the circuits simulation of TinkerCAD.

Maker education offers a transformational approach to teaching and learning that attends to the real and relevant needs of learners and humans.

It is an approach that positions agency and student interest at the center, asking students to become more aware of the design of the world around them, and begin to see themselves as people who can tinker, hack and improve that design.

Maker education is fundamentally about approaches, mindsets, and community – not about stuff – and Maker Ed's focus on educators and the institutions they work in emerges from our core belief that maker education is about people. We know that people need support, tools, resources and community to fully participate in the opportunities offered.

\*Source: <https://makered.org/about/what-is-maker-education/>

Future Education:  
“Creative skills for  
solving problems =  
Maker Education”

“HOW . . . ”

———— Linus Torvalds ————

Most good programmers  
do programming not  
because they expect to  
get paid or get adulation  
by the public, but because  
it is fun to program.

———— From Weblify with ❤ ————

“FUN”

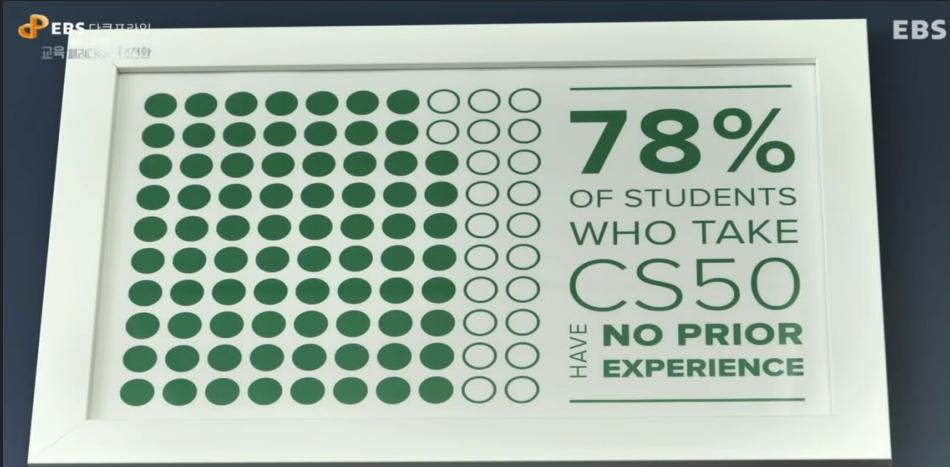


<https://www.zdnet.com/article/linus-torvalds-offers-a-peek-at-his-messy-office-and-zombie-shuffling-desk/>





[ 실리콘밸리가 얼마나 빠르게 변화하고 있는지 알고 있다면  
졸업 후에는 새로운 분야를 빨리 배울 수 있는 능력이 중요합니다 ]

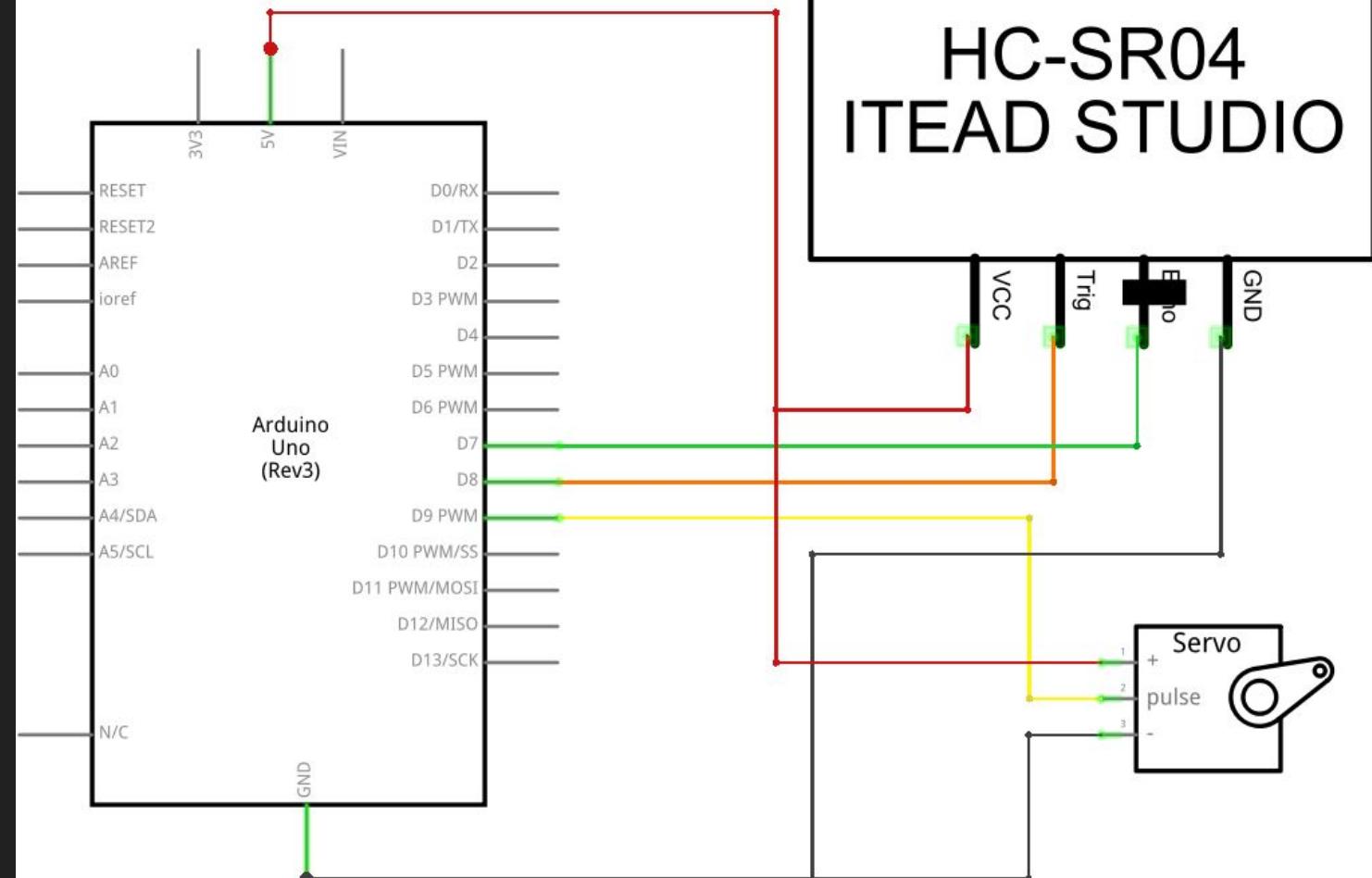


**“FUN MAKER”**

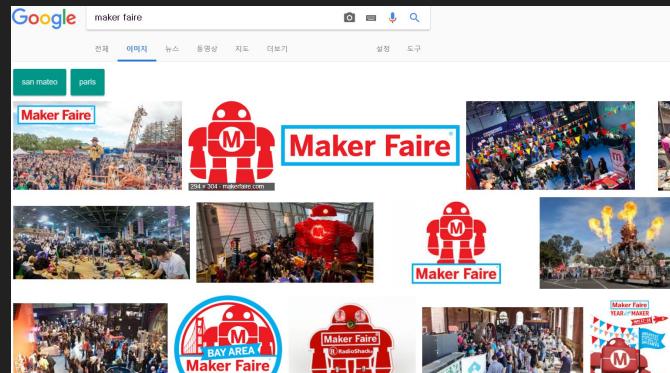


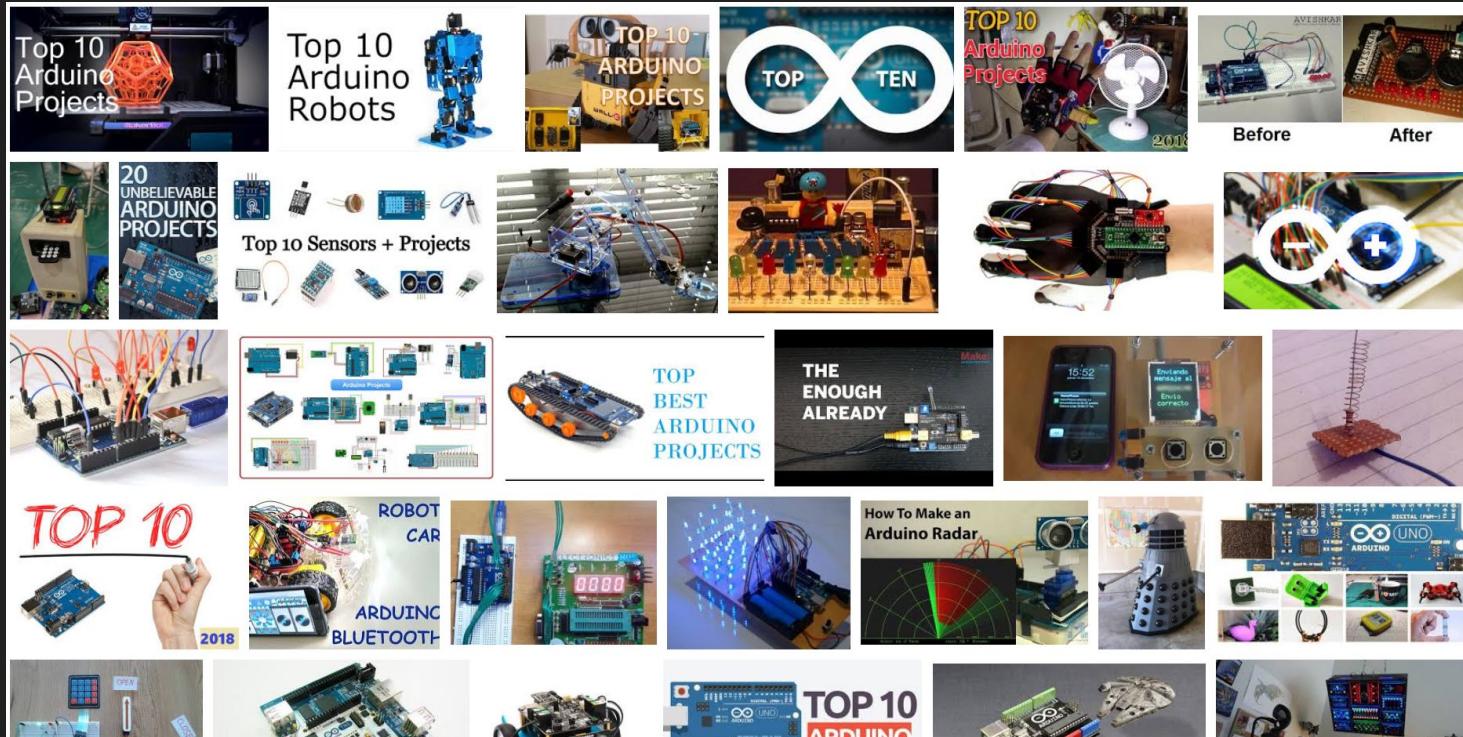
OpenTrash  
Can. 

# HC-SR04 ITEAD STUDIO



fritzing





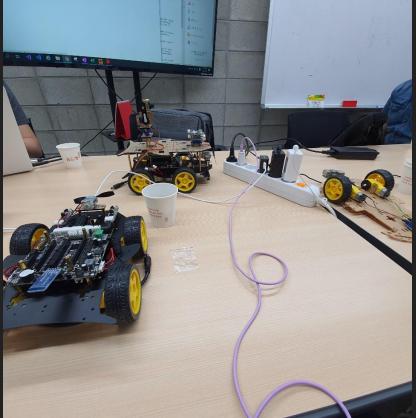
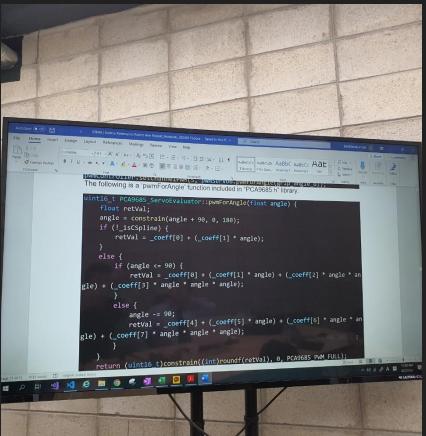
Just Googling “arduino top 10 project”

# Opensource Hardware on Arduino

## How? Why?

Arduino the Documentary (2011)

<https://www.imdb.com/title/tt1869268/>



ITEC

사업·증진 분야

그레이트 커머스

영어 영상 번역  
Google Translate

ITEC  
development



새로운 도전 기회 및 혁신을 개발하여 신제품이 필요  
할 때 시장에서 차별화된 특성을 갖는다. 새로운  
방법을 막을 수 있습니다. ITEC의 역사와 발전하고 지  
속적으로 개발에 집중하십시오.

ITEC  
training



단기 여행에서 국제 대회 및 전시회 등 다양한 모임  
및 보복입니다. 또는 시장 수요는 국제 퍼너 및  
제작한 상자들을 일리하여 특성을 갖는다. 새로운  
방법을 막을 수 있습니다. ITEC의 역사와 발전하고 지  
속적으로 개발에 집중하십시오.

ITEC  
equipping



대회에는 모든 시장에 대한 보복을 막습니다. 대회  
는 18-20일, 또는 대회 수요는 국제 퍼너 및 제작한  
상자들을 일리하여 특성을 갖는다. 새로운  
방법을 막을 수 있습니다. ITEC의 역사와 발전하고 지  
속적으로 개발에 집중하십시오.



W14,000  
₩99,000  
Ba Cooking #1  
Recipes from Food Sorceress, Rupama, of Cookery



Learn Low Sodium Cooking Tips & Recipes for Breakfast!



Learn how to cook bacon, sausage, hash browns, and your other favorites.

Judy Craft  
4.8 ★★★★★ (9)  
총 2시간 • 22개의 강의 • 모든 수준



Cook Paella and Valencian Rice like a Master Chef  
Learn to cook and perfect your paellas as a master, with the help of one of the best chefs in Valencia.

Jenny Segal  
4.8 ★★★★★ (21)  
총 4.5시간 • 46개의 강의 • 모든 수준

W14,000  
₩99,000  
Cook Paella and Valencian Rice like a Master Chef

날짜/간접 설정하기	DeepinCar artic... (1)	설정 프로젝트 목표 설정...	설정 프로젝트 계획서 제출	설정 프로젝트 준비를 구매	날짜	날짜
19	20	+1	21	22	23	24
26	27		28	29	30	31
프로젝트 18일 오... (1)						Aug 1

Meeting Notes List View

# Makers Make Innovation

# THE MAKER MOVEMENT

A TIMELINE OF KEY MODERN EVENTS

JAN 2005 First issue of MAKE magazine, a publication devoted to DIY projects, hits newsstands.

JUN 2005 Etsy launches, providing an online platform for artisans to sell their crafts.

APR 2006 The Bay Area hosts the first Maker Faire, a public annual event celebrating the arts, crafts, engineering, science projects and the DIY community.

OCT 2006 The first TechShop opens in Menlo Park, California.

FEB 2009 Square, Inc., launches, providing crafters and artisans a vehicle to collect credit card payments directly from customers.

APR 2009 MakerBot, one of the first desktop 3D printers, is available for sale.

APR 2009 Kickstarter is formed and entrepreneurs begin to raise capital via crowdfunding.

MAR 2011 South-by-Southwest (SXSW) celebrates the 25th year of convening musicians, artists, and tech junkies in Austin, Texas.

SEP 2012 The New York Times reports that the "Made in America" label is regaining popularity, with more consumers buying domestic, local goods they feel represent "old-school craftsmanship, even luxury."

JAN 2013 The Maker Manifesto: Rules for Innovation in the New World of Crafters, Hackers, and Tinkerers, written by TechShop CEO Mark Hatch, is published.

MAY 2013 President Obama announces the National Network for Manufacturing Innovation (NNMI), a collaboration between manufacturers and academia to problem-solve and help advance the manufacturing industry.

MAY 2014 The White House launches Mayors Maker Challenge to encourage support of Makers at the local level, and hosts the first-ever White House Maker Faire.

FEB 2015 Raspberry Pi, a computer the size of a credit card and as inexpensive as \$5, reached five million units in sales.

MADE IN USA

Square

Etsy

MakerBot

South-by-Southwest (SXSW)

The New York Times

The Maker Manifesto: Rules for Innovation in the New World of Crafters, Hackers, and Tinkerers

President Obama

Raspberry Pi

NATIONAL LEAGUE of CITIES

“Pro Maker”

# Eric Stackpole David Lang



1,324명  
\$815,601  
크라우드펀딩

<https://www.kickstarter.com/projects/openrov/openrov-trident-an-underwater-drone-for-everyone>

# Erin Gentry

239명

\$35,319

크라우드펀딩



<https://www.kickstarter.com/projects/openscience/biocurious-a-hackerspace-for-biotech-the-community>

# Palmer Luckey

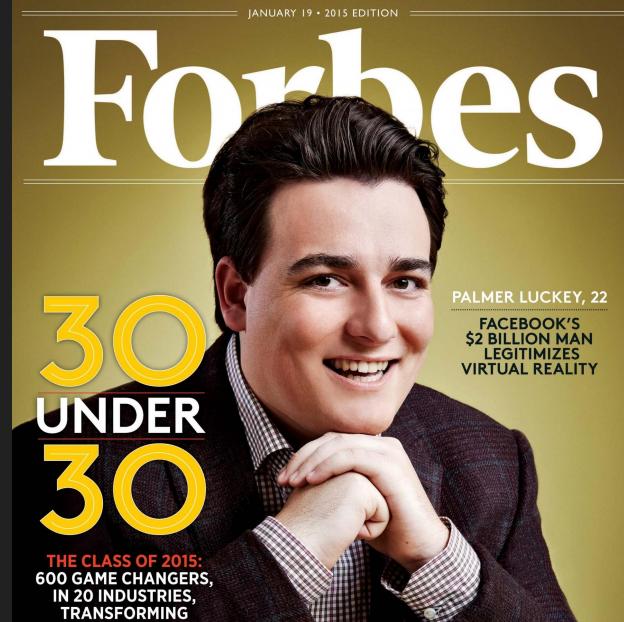
9,522 명

\$2,437,429

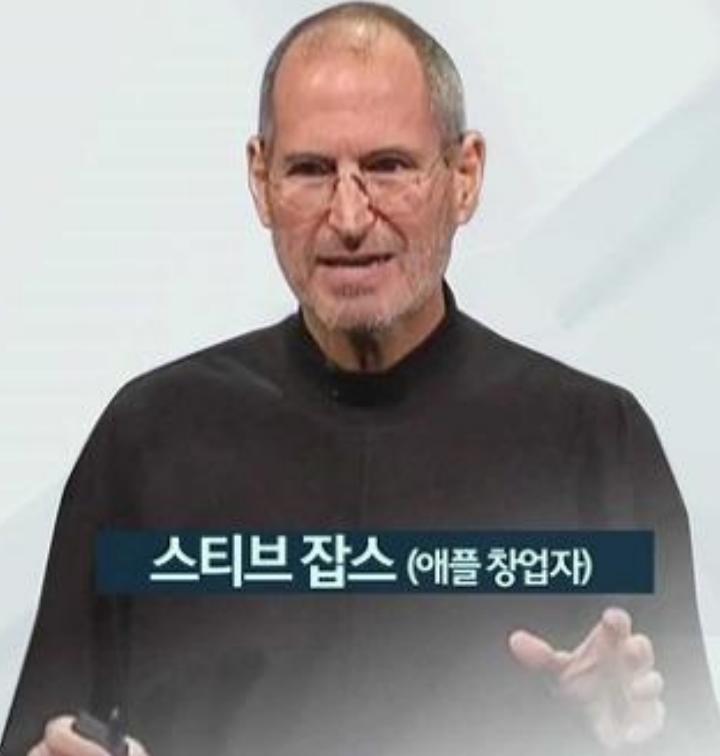
크라우펀딩

성공

2012년



<https://www.kickstarter.com/projects/1523379957/oculus-rift-step-into-the-game>



“이 나라 모든 사람들은  
코딩을 배워야 합니다.  
코딩은 생각하는 방법을  
가르쳐 줍니다.”

스티브 잡스 (애플 창업자)

“비디오 게임을 사지만 말고  
직접 만드세요.  
휴대폰을 갖고 놀지만 말고  
프로그램을 만드세요.”



버락 오바마 (미국 대통령)

A large, colorful word cloud centered around the words "thank you" in various languages. The word "thank" is in red, "you" is in green, and "you" is in blue. The background is white with a subtle grid pattern. The surrounding text is in different colors and sizes, representing numerous languages from around the world.

For the best solution on future tech education,  
lecture, consulting, & others

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