ICT SHOWROOM

STUDENT PROJECT EXHIBITION AND COMPETITION

2022

tietoevry

PONSSE

EPEC

2M IT

if...

N4

CADMATIC

ictshowroom.fi

#ictshowroom

linkedin.com/company/ict-showroom

TURKU BUSINESS REGION TechTurku Week 7.-11.3. 2022

TURKU AMK
TURKU UNIVERSITY OF APPLIED SCIENCES

Åbo Akademi

Turun yliopisto
University of Turku

Schedule 10.3.2022

Event takes place in Educity, TUAS
Team present their project on-site through pitches

10:00 ICT Showroom opens, https://abacus.abo.fi/ictshowroom
10:00 Public voting opens (Click to vote),
(the audience may vote for **best performance** and **best technical content**)
10:00 On-site pitching starts (in two rooms)
13:00 On-site pitching ends
14:00 Public voting ends
14:00 Pitch finalists are announced (on ictshowroom.fi AND via team contact person email, stay tuned)
14:30 Pitch finals (tiedonportaat)
15:00 Winners are announced
15:15 → Showroom Afterwork by Boost @ Sparkup

Jury members

- Cadmatic (Teemu Valtonen)
- IF (Krista Vahlo)
- Nextfour (Niklas Öhman)
- Ponsse/Epec (Kalle Einola)
- Tietoevry (Lasse Mäki-Hokkonen)
- ITCORNER / Wrocław (Jakub Jarosz)
- Turku Science Park (Michael Lindholm)
- Boost (Max Garner)

Sponsors of the event

2M-IT Oy – Cadmatic - IF – Nextfour – Ponsse/Epec – Tietoevry

Organizers and contact information

ICT Showroom
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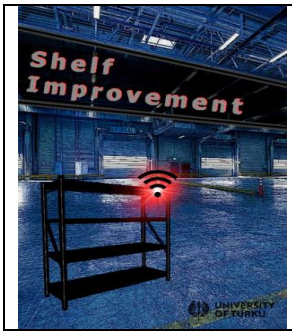
Marika Säisä, Turun ammattikorkeakoulu, 044 9072 080, marika.saisa@turkuamk.fi
Timo Vasankari, Turun yliopisto, 040 554 6246, timo.vasankari@utu.fi



S11 Shelf-Improvement

Embedded system,Web,IoT
Other,Infrastructure services,Smart services

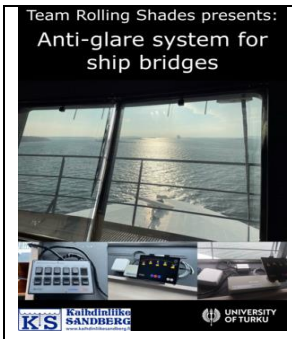
Automated refill ordering with smart shelf

Ali Kargarandehkordi, Erik Haapa, Lassi Lehtinen, Teemu Simola, Tuukka Aro, Samuli Pitkänen

Contact person: stjpit@utu.fi
Web:
Video: https://www.youtube.com/watch?v=7Cg0jiNPtjk

The goal of the project is to create an automated ordering system to fill the empty spots of the shelf in an industrial production line by utilizing sensors. Smart shelf speeds up the work of employees by reducing unnecessary waiting of the refill and possible mistakes of ordering.

UTU



S12 AGSSB

Embedded system,Desktop
Other,Infrastructure services,Marine Industry

Anti-Glare Systems for Ship Bridges

Ville Iso-Kouvola, Juho Karasti, Elmeri Kuismin, Erkka Lehtihuhta, Tatu Peltola, Panu Puhtila

Contact person: vvisko@utu.fi
Web:
Video: https://drive.google.com/file/d/1qRSM8xzSeFwyX8CQkGjyJ268AaT-r3Ns/view?usp=sharing

Our project is to develop a motorized anti-glare system for ship bridges for our client company Kaihdinliike Sandberg. The system contains UI and hardware to control the blinds. The goal of this project is a more user-friendly and wear-resistant system than the manual systems currently used on ship bridges. In this project we need programming and hardware design skills. Collecting user experience data from end users is also important.

UTU

S13 eGradu

Web,
Education,

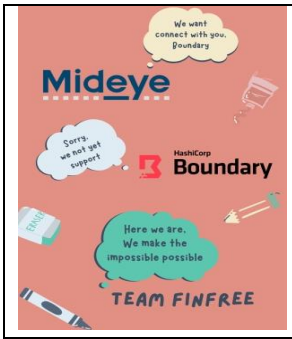
Platform that automates some of the workflows in the Pro Gradu thesis process

Linus Hindersson, Alina Torbunova, Fredrik Sjöberg, Sebastian Pulkka, Patrik Runeberg, Alexander Tallqvist

Contact person: linus.hindersson@abo.fi
Web: https://egradu.testiosoite.com/
Video: https://www.youtube.com/watch?v=iWkkSfxmUz4

Electronical system to follow up the process of producing and grading students' theses. The idea of the system is to combine all thesis-related communication and bureaucratic process on the same platform to achieve a smoother process structure. The system is available for different users involved in the process: student, supervisor, head of subject, language center and thesis evaluator. Full description of the thesis process at ABO: https://libguides.abo.fi/egradu

ABO



S14 Finfree

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Other,Identity and Access Management (IAM)

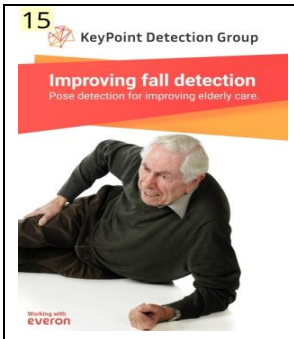
Identity-based access for zero trust security.

Evan Roman, Evanfiya Logacheva, Duy Le.

Contact person: evan.roman@abo.fi
Web:
Video: https://youtu.be/KnUaRSFYZYk

Our project aims to create an integrated cybersecurity solution of two prominent products – Mideye's Authentication Service and Hashicorp's Boundary, a tool that allows simple and secure remote access to applications and critical systems with fine-grained authorisations based on trusted identities.

ABO



S15 KPG

AI, Healthcare,

Pose detection systems for elderly care

Tomas Granholm, Jesper Winsten, Sebastian Aarnio, Sebastian Sjödahl, Mathias Norräng

Contact person: tomas.granholm@abo.fi
Web:
Video: https://youtu.be/r7IE9higMeY

Keypoint Detection Group revolutionizes the healthcare and social services industry by offering smart solutions that utilize the latest advancements within Artificial Intelligence (AI). Our pose estimation model allows the remote monitoring of patients by utilizing live video feeds and advanced machine learning models. Live updates of the patients' current pose can be used to ensure the patients' safety and wellbeing by identifying any irregular activity, reducing the response time for healthcare workers in case of a medical emergency.

ABO

S16 Smash o' scope

Desktop, Games and entertainment

Smash o' scope - Videogame where you handle oscilloscope and use oscilloscope's wave to eliminate hostile creatures within the screen.

Emilia Heinonen, Joonas Sariola, Nora Holmberg, Tatu Arvonen, Tuomas Suni

Contact person: joonas.sariola@edu.turkuamk.fi
Web:
Video: https://www.youtube.com/watch?v=B_askMKjXdo

This oscilloscope seems cursed! There's hostile creatures crawling from top to bottom of screen and you need to stop them with alinging oscilloscope's wave on creatures before they reach the bottom!

TUAS

S17 STGP

Web,Mobile, Games and entertainment,Gamification

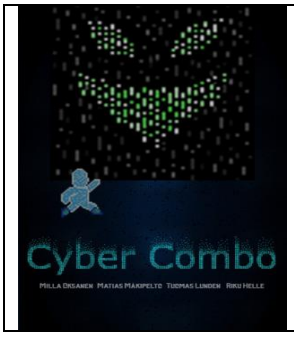
Seal Team Gamification Project

Topi Suvimeri, Lassi Haapala, Oskari Noppa, Aleksi Torri, Antti Vuorinen, Honghao Du

Contact person: ttvuot@utu.fi
Web:
Video: https://www.youtube.com/watch?v=DjHdlQJ-o_I

Gamifying an online platform that people can seal their deals with a strong identification. Our project shows our ideas how to make online platforms more fun for the end user.

UTU



S18 Cyber Combo

Desktop, Games and entertainment

Sidescroller platformer

Riku Helle, Tuomas Lunden, Matias Mäkipelto, Milla Oksanen

Contact person: tuollu@utu.fi
Web:
Video: https://youtu.be/WwvkgAFMua0

Cyber Combo is a 2D puzzle platformer, created with pixel graphics and shoot from the side perspective.

UTU

S19 Velofore

Web,Mobile,Cloud,Image recognition Other,Sports and self development

Mobile app for skill progression in golf

Thomas Holmberg, Robert Kantero, Edvard Söderback, Hektor Dahlberg, Henrik Martola, William Nylund

Contact person: thomas.holmberg@abo.fi
Web:
Video: youtube.com/watch?v=9h1saEogDKU

Our vision is to create an affordable and accessible solution to track skill progression in golf with an easy to use mobile application. The app's focus is to record the user's swing with the smartphone's built-in camera and measure the club head speed using image recognition.

ABO

ICT Showroom 2022

S20 KIELO

Mobile, Sustainable development

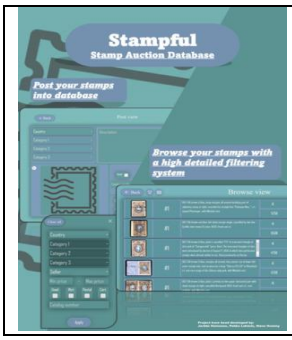
App to promote recycling

Jyri Kuivanen, Jesse Laaksonen, Emma Tennosmaa, Matias Lehtonen, Pekka Kononen, Risto Erkkilä, Kalle Huuskonen, Jarkko Heinonen, Ahmed Said Abdirahman

Contact person: jyri.kuivanen@edu.turkuamk.fi
Web:
Video: https://vimeo.com/685143695

KIELO project aims to build an application to promote recycling. The app utilizes existing geographic data of recycling points and provides information to help users to recycle all their used material from plastic packages to car tires and hazardous waste.

TUAS



S21 Stampful

Web, Other,Database tool

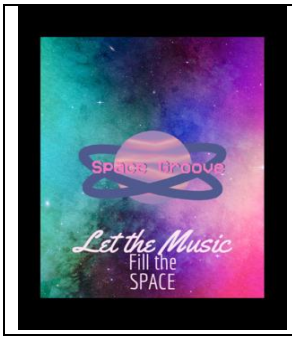
Database system for information of auctioned stamps

Jarkko Heinonen, Pekka Lehtola, Steve Hommy

Contact person: jarkko.heinonen@edu.turkuamk.fi
Web:
Video: https://www.youtube.com/watch?v=sX-MFyhCg0Y

A web application used to store information about auctioned stamps including starting- and selling price, selling year, seller company, pictures of the stamp and stamp conditions. The application offers a customizable categorization for stamps and in depth filtering options for browsing the posted items with fast and intuitive user interface.

TUAS



S22 Space Groove

Desktop, Games and entertainment

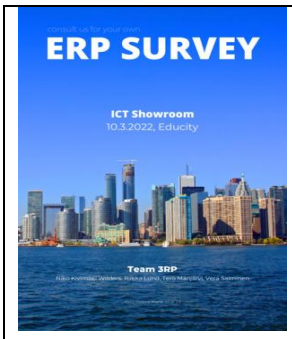
A group made rhythm game

Thomas Kavon, Petra Nieminen, Juho Steenari, Aarni Äijö, Olivia Carpelan

Contact person: thomas.kavon@edu.turkuamk.fi
Web:
Video: https://www.youtube.com/watch?v=QngbD8Qd-Hk

A group project to create a rhythm game with funky vaporwave graphics and beats to go along with it. Fun for the whole family and a good competitive challenge to have with your friends. Link to download a playable version of the game: https://drive.google.com/drive/folders/1EkcqokuxD6hntagxKtQy4Dh1o4ZQCBs4?usp=sharing

TUAS



S23 ERP Survey

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Software consulting project for a mid-size company

Tero Märijärvi, Riikka Lund, Vera Salminen, Niko Kivimäki Wilders

Contact person: tsmari@utu.fi
Web:
Video: https://vimeo.com/685149642

As companies grow in size from small operations to larger enterprises, managing the company assets, schedules and finances gets more and more complicated, and without a solid system this can cause disruptions and profit losses. It is not atypical for a growing company to become a victim of its own success in this way. For this project, we are working as IT-consultants for a mid-size company looking for Enterprise Resource Management solutions suited to them. We identify their needs, and then from hundreds of commercially available ERP products, we pinpoint the one that most fits their criteria.

UTU

S24 Storedash

Web,Mobile,Cloud,Business intelligence/digitalization Other,customer service

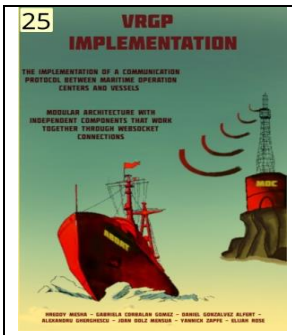
Mapping system for stores

Niki Norrman, Sabina Back, Maxemilian Grönblom, Lucas Fransman, Albert Valeev, Emil Grönmark

Contact person: nnorrman@abo.fi
Web: storeda.sh
Video: https://youtu.be/s10o5dK-HEE

An application that helps customers locate the product they are looking for and help them navigate the store in a mutually beneficial way.

ABO



S25 VRGP

Embedded system, Public services,Infrastructure services,Communicatin

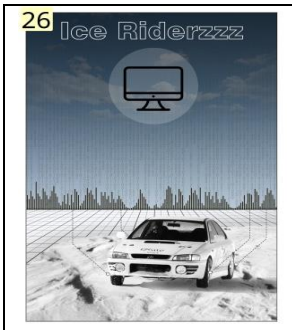
Implementation of the VRGP protocol specification for communication between vessels

Hredoy Mesha, Daniel Gonzálvez, Alexandru Gherghescu, Elijah Rose, Yannick Zapfe, Joan Dolz, Gabriela Corbalán

Contact person: gabri.corba@gmail.com
Web:
Video: https://drive.google.com/file/d/1TqZ-rIeIkxyVM-Zs09bWGXEJgcPuA4vY/view?usp=sharing

Our vision is to provide software that ensures the safe navigation of possibly autonomous ships by implementing the vessel side of the Vessel Remote Guidance Protocol (VRGP). We aim to show that the protocol works by providing a prototype implementation for the Åboat with a generic core implementation of the protocol that can be used as a starting point for real-world implementations. The goal of the VRGP protocol is for vessels to securely communicate in real-time with on-shore maritime operating centers (MOC) which can provide guidance, e.g. for docking vessels. Ultimately, this would avoid putting lives in danger when docking vessels as the physical presence on-board would become unnecessary. The protocol allows access to key sensors and even video data on vessels to provide MOCs with relevant up-to-date information.

ABO



S26 Ice Riderzzz

Embedded system,IoT,AI Infrastructure services,Autonomous Systems,Transport Services

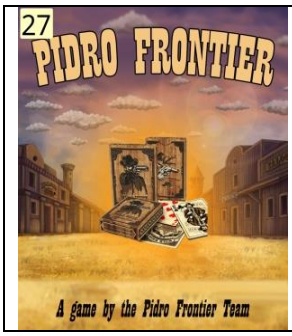
Real time detection of road surfaces using audio data and ML

Atte Rehnbäck,Jan Böhmeke,Jonas Sandelin,Marius Gurgu,Pietari Pelto-Piri,Niina Alén,Debom Ghosh

Contact person: mmgurg@utu.fi
Web: https://github.com/TheLonelyFighter/Capstone
Video: https://www.youtube.com/watch?v=DMT7mT9B3p4

We used a custom built setup (Raspberry Pi + directional microphone) mounted on a car to record the sound of the tires while driving. Drive tests were performed on multiple surfaces, such as snow, asphalt, ice and gravel. The recorded audio was used to train a machine learning model that differentiates between driving surfaces using only acoustic data. Our prototype is able to differentiate between surfaces in real time, while driving. The concept has a direct application for autonomous cars and human drivers, since it detects dangerous driving conditions using a reliable setup, easy to integrate into existing vehicles.

UTU



S27 Pidro Frontier

Web,Desktop, Games and entertainment

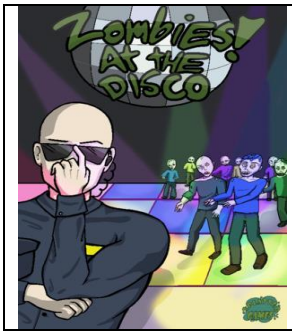
Pidro Frontier

Niklas Karvonen, Tony Lindberg, Benjamin Heinonen, Dandi Gutema

Contact person: niklas.karvonen@abo.fi
Web:
Video:

Our vision is to create a free-to-play app of the card game Pidro under the name Pidro Frontier.

ABO



S28 Zombies! at the Disco

Desktop, Games and entertainment

2D top-down shooter game

Joonas Alitalo, Arttu Niemi, Suvi Örling, Ville Lehvonen, Veera Määttänen, Paavo Auranen

Contact person: ville.lehvonen1@edu.turkuamk.fi
Web:
Video: https://youtu.be/GYwyBEWWE74

Zombies! at the Disco is a wave survival game with a colourful twist. What was supposed to be a normal night at the Disco, quickly turned into a nightmare. To survive the disco night, you need to push back the horde by using projectiles with matching colours. How long can you survive?

TUAS

S29 Dash Dash Dragons

Desktop, Games and entertainment

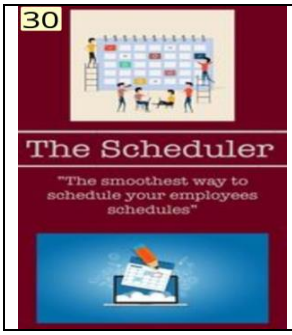
Fantasy Puzzle Game for PC

Milla Pöyry, Roope Saarikivi, Santeri Sinisalo, Emilia Numminen, Alina Palmgren

Contact person: milla.poyry@edu.turkuamk.fi
Web:
Video: https://tuas365-my.sharepoint.com/:v:/g/personal/roope_saarikivi_edu_turkuamk_fi/EYLqnl1gOwlAjCdmgYHiinEBRy4sMR-9B3GYv3zHxIOOIQ?e=oqiQku

Dash Dash Dragons is a brain-tickling, fantasy-themed puzzle game for Windows PC. Guide your knight through the maze-like castle while avoiding perilous dangers!

TUAS



S30 The Scheduler

Web, Education,

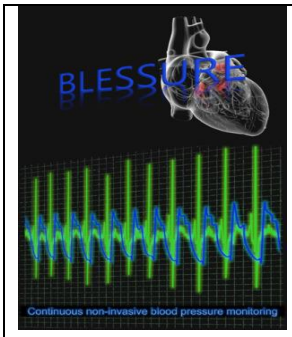
A web-based scheduler for AboaMare

Jonas Fellman, Rickard Bäckman, Nicola Aspelin

Contact person: jonas.fellman@abo.fi
Web:
Video: https://youtu.be/3N1RdVBTesk

This web-based application will help AboaMare to schedule lectures across three different institutions.

ABO



S31 Blood pressure system

HW,AI, Healthcare,

Continuous non-invasive blood pressure monitor

Hernandez Ledesma Alberto Carlos, Jokinen Juuso, Mäntyniemi Santeri, Nuutinen Emil, Remes Mikael, Wang Yuning, Tuominen Jukka

Contact person: jhjoki@utu.fi
Web:
Video: https://www.youtube.com/watch?v=84yCkHplplo

With over 2 million people with elevated blood pressure in Finland alone the demand for an easy way to measure continuous blood pressure is higher than ever. Our goal was to build a device for continuous non-invasive blood pressure monitoring. The goal was to build a relatively accurate device that would be easy to use for extended periods. We built a working prototype that measures the blood pressure from the Pulse Arrival Time between ECG and PPG sensors. We were able to estimate the continuous blood pressure by training a machine learning model from the data collected with our device.

UTU

S32 DigiReactor App

Mobile, Education,

Mobile application for DigiReactor

Laura Granath, Aleksi Männistö, Niki Leppänen, Niklas Nordman, Janina Kokkonen, Jimi Keurulainen

Contact person: laura.granath@edu.turkuamk.fi
Web: https://digireactor.fi/
Video: https://youtu.be/gjLsBpbulp8

Boost your digital product development skills with DigiReactor's free app, coming to your local app store soon!

TUAS

S33 Arts of Sorcery

Mobile, Games and entertainment

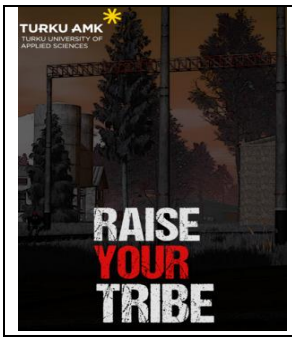
A 2D top-down dungeon crawler designed for Android devices.

Markku Iltanen, Milla Ginlund, Micael Sacklén, Niko Tapola, Lasse Kivinen

Contact person: lasse.kivinen@edu.turkuamk.fi
Web:
Video: https://youtu.be/nfr-SnwJB90

"Arts of Sorcery" is a top-down dungeon crawler made for Android devices. The goal of the game is to clear as many randomly generated rooms as possible without dying. The player moves from room to room my defeating all of the enemies in the current room to unlock the doors and proceed to the next room. The game includes features such as: random room generation, currency & shop system, 3 different enemy types with unique AI and 2 weapon types.

TUAS



S34 Raise Your Tribe

Desktop,
Games and entertainment

A Survival Multiplayer game

Bäcklund Kristian, Korpiaho Ville, Rajakangas Jori, Turila Emmi, Virtanen Viivi, Ahlsten Mika

Contact person: mika.ahlsten@edu.turkuamk.fi
Web:
Video:
https://www.youtube.com/watch?v=JzXfNY2XxnQ&ab_channel=VoidCompiler

Raise Your tribe and fight against robots or other survivors. Explore, craft, build and survive in a deadly post-nuclear war island, where artificial intelligence has defeated humanity. Start from scratch and end up as the leader of the island

TUAS

S35 Markkina-tietäjä

Web,
Business administration

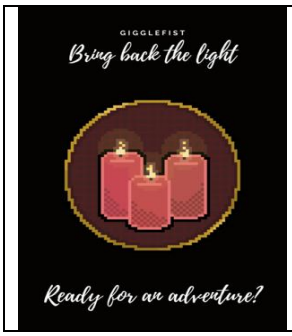
Automated market research for the Finnish IT sector

Polina Petrova, Andreia Rocha, Marienna Meriluoto, Jerry Stigell, Teppo Salonen, Samppa Kemppainen, Vinayak Chaturvedii

Contact person: polina.petrova@edu.turkuamk.fi
Web:
Video: https://www.youtube.com/watch?v=IcgQW-voI4M

The goal of the project is to create a web tool meant to collect open-source Finnish labor market data, analyze, transform and visualize it. Its purpose is to provide users with a picture of which IT skills are needed right now, which tools are popular and where IT companies are gathered. It's a perfect solution for companies who would like to learn more about the current labor market but do not have means to gather and analyze the data. The tool's simple and elegant design will make the experience positive and easy even for people who are not proficient in data analysis. The tool can be used by consulting companies, IT companies, universities, students and professionals in the industry. It will help anyone interested to make an educated guess about how the Finnish IT market might look like in the near future.

TUAS



S36 GiggleFist

Desktop,
Games and entertainment

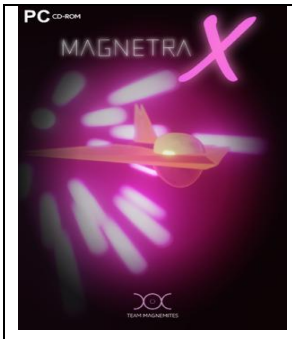
A story of choices

Roope Lehtinen, Joonas Ljungqvist

Contact person: roope.lehtinen@edu.turkuamk.fi
Web:
Video: https://youtu.be/PxVj5G3xnxc

GiggleFist is a text based story oriented game where the player plays as a character GiggleFist and goes on a quest.

TUAS



S37 MagnetraX

Desktop,
Games and entertainment

Physics-based hovercar racing game

Aleksi Papalitsas, Timo Tiippana, Maiju Kyyhkynen, Lassi Harju, Levente Molnár, Elmo Kilkki

Contact person: almipap@utu.fi
Web:
https://drive.google.com/drive/folders/1U4GU22CyT996p1J-Dre6aaWfqC5Rwlj8?usp=sharing
Video:
https://drive.google.com/file/d/1J2ZJesvWwRekvNeRPEL7Ukq--3XR9nnk/view?usp=sharing

The project is a racing game with varying environments where the cars are hovering the track with electromagnetic power.

UTU

S38 Cubic Conflict

Desktop, Games and entertainment

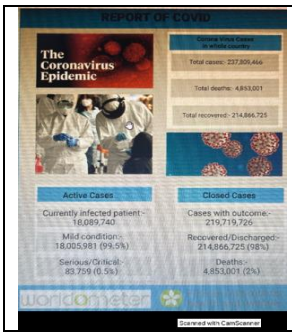
Fast paced RTS game

Samuel Leinonen, Lassi Haapala, Panu Puhtila, Rasmus Riihimäki

Contact person: rbriih@utu.fi
Web:
Video:
https://www.youtube.com/watch?v=KtL0rerNwq4

Cubic Conflict is a fast paced multiplayer RTS game where you build different geometrically shaped units to conquer capture points. Different shaped units have different abilities and features and can be used strategically to take over your opponent.

UTU



S39 COVID Vaccine

Web, Business administration

Web application

Elisha Baniya

Contact person: elisha.baniya@edu.turkuamk.fi
Web: Github
Video: https://github.com/0303vikas/Covid-Vaccine-Web-Application

This project is creating a general web application for COVID Vaccine.

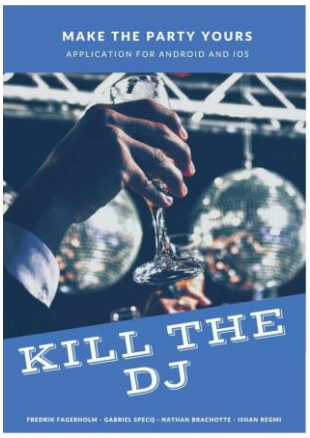
TUAS

2020

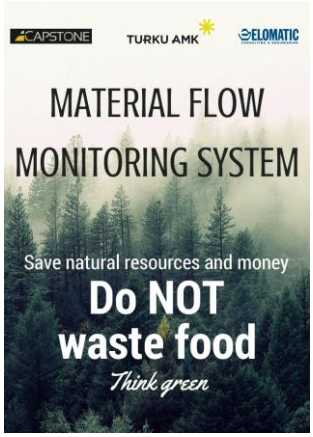
2021

2019

2018



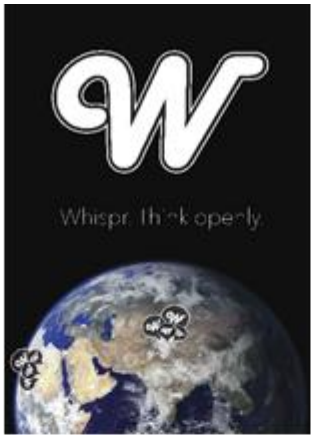
2017



2016

ICT Showroom 2022

2015



2014

2013

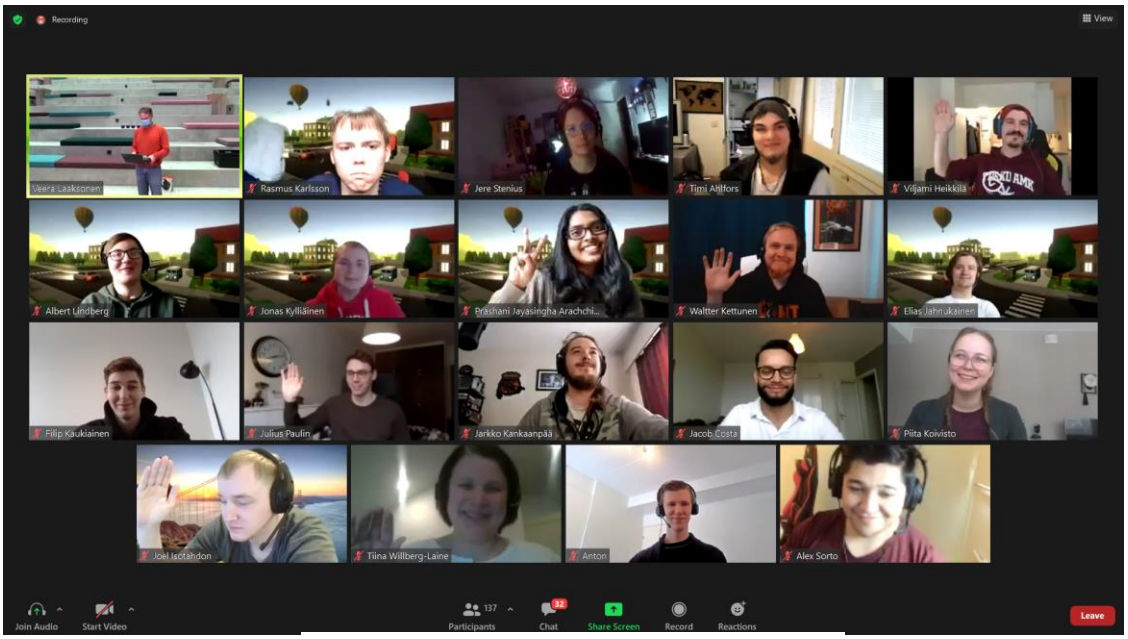
2012

2011

2010

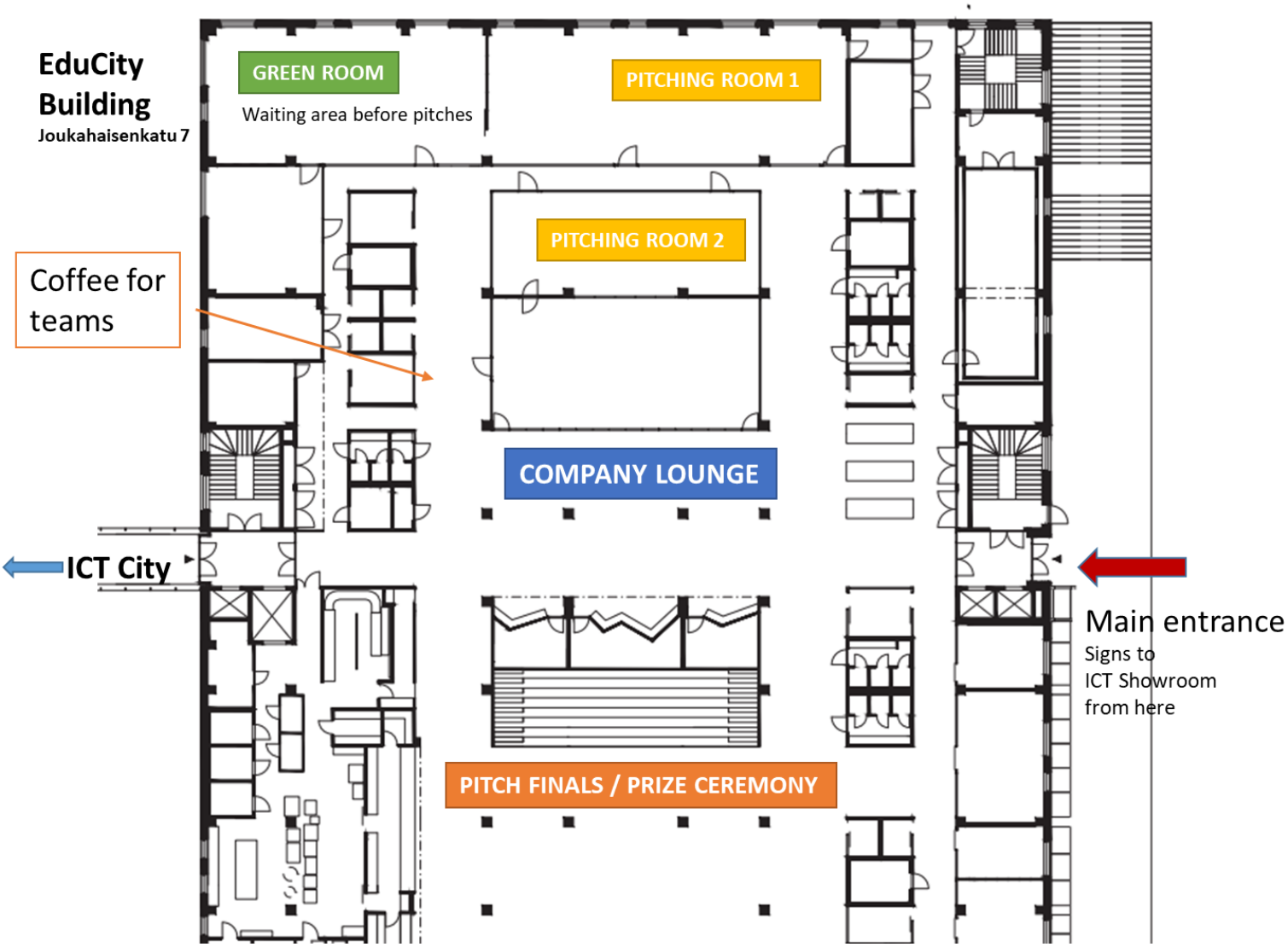
2009

2008



From prize ceremony 2021

ICT Showroom 2022



ICT SHOWROOM

STUDENT PROJECT EXHIBITION AND COMPETITION

Schedule for pitches

Pitching room 1			Pitching room 2		
Time	Nr	Project name	Time	Nr	Project name
10:00	11	Shelf-Improvement	10:05	12	AGSSB
10:10	13	eGradu	10:15	14	Finfree
10:20	15	KPG	10:25	16	Smash o' scope
10:30	17	STG	10:35	18	Cyber Combo
10:40	19	Velofore	10:45	20	KIELO
10:50	21	Stampful	10:55	22	Space Groove
11:00	23	ERP Survey	11:05	24	Storedash
11:10	25	VRGP	11:15	26	Ice Riderzzz
Break			Break		
11:30	27	Pidro Online Reborn	11:35	28	Zombies! at the Disco
11:40	29	Dash Dash Dragons	11:45	30	AboaSched
11:50	31	Blood pressure system	11:55	32	Digireactor App
12:00	33	Arts of Sorcery	12:05	34	Rusty Robots
12:10	35	Markkina-tietäjä	12:15	36	GiggleFist
12:20	37	MagnetraX	12:25	38	Cubic Conflict
12:30	39	COVID Vaccine	12:35	40	
12:40	41		12:45	42	