



**RĪGAS TEHNISKĀ
UNIVERSITĀTE**

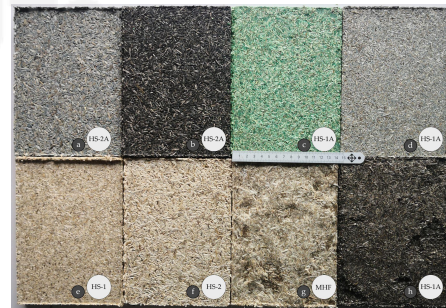
Dizaina tehnoloģiju institūts

Materiālzinātnes un lietišķās ķīmijas fakultāte

Digitālie rīki un to lietojums dizaina un tehnoloģiju mācību stundās

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2023



A AUTODESK[®]
AUTOCAD[®]

 **SketchUp**

 | AUTODESK[®]
3DS MAX[®]


3D SOLIDWORKS

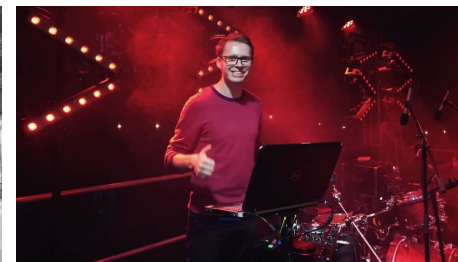

v-ray

 **Ai**

 **Ps**

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e-mail: kristaps.zvirgzds@rtu.lv
Phone: +371 26429050

www.linkedin.com/in/kristaps-zvirgzds-04549814a/







Dizaina tehnoloģiju institūts ir vieta, kur satiekas tehnoloģijas, dizains un pētniecība.

Arī spēlējot datorspēles var apgūt prasmes, kas noder sadzīvē. Piemēram, spēle THE SIMS var sniegt zināšanas interjera dizaina veidošanā par telpu zonējumu, ergonomiku, mazu telpu iekārtošanu, renovācijas izmaksām u.c.

<https://happyhome.clinic/the-sims-interior-design>



Saturs

Šajā prezentācijā vēlos Jūs iepazīstināt ar:

- *Dizaina domāšana un koprade*
- *2D un 3D rasēšanas, modelēšanas programmas, rīki un datubāzes*
- *Grafiskā dizaina aplikācijas u.c.*
- *Darbu reprezentācija un portfolio veidošana*

Dizaina domāšana - teorija



Sadaļas:

I. Kas ir dizaina domāšana?

II. Dizaina domāšana kā piecu soļu process

III. Dizaina domāšana kā domāšanas veids vai attieksme

IV. Dizaina domāšana kā rīku un metožu kopums

V. Īss ieskats dizaina domāšanas vēsturē

VI. Jauns domāšanas veids jaunām problēmām

“Startdesign.lv” mājaslapa ir domāta ikvienam, kas vēlas pašmācībā apgūt dizaina domāšanu.

Šī mājaslapa ir īpaši noderīga Latvijas skolu pedagogiem kopš Latvijā tiek ieviests pilnveidotais mācību saturs un pieeja, ko izstrādā Valsts izglītības satura centrs (VISC), – projekts “Kompetenču pieeja mācību saturā” jeb “Skola2030”.

Apskatītās tēmas: *Dizaina domāšana, Izpēte, Problēmas definēšana, Ideju izstrāde, Prototipēšana un Testēšana.*

<https://www.startdesign.lv/dizaina-domana>

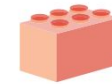
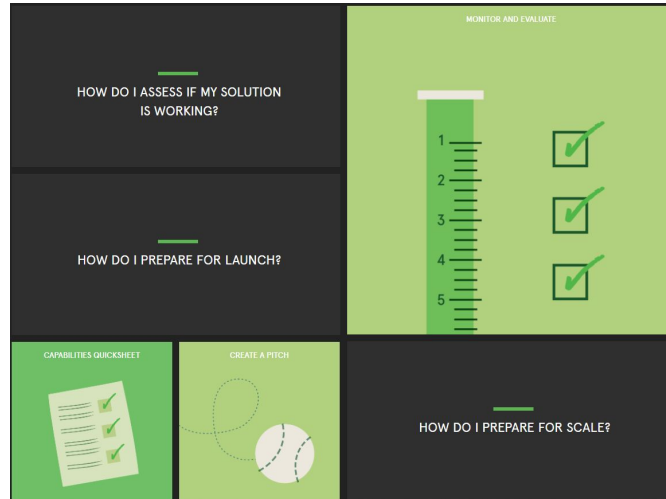
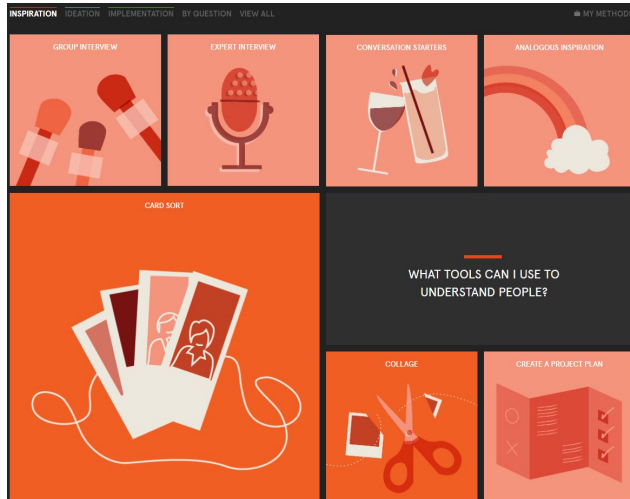
Dizaina domāšana - teorija



2020. gadā ir tapuši bezmaksas mācību materiāli, kas palīdzēs Dizaina un tehnoloģiju pedagogiem apgūt tādus dizaina virzienus kā vides dizains, interjera dizains, modes dizains un produktu digitālais dizains. Mācību materiālos ir iekļauti gan vietēji, gan starptautiski piemēri, darba uzdevumi un darba lapas, kas var noderēt, lai organizētu darbu mācību stundās.

<https://www.startdesign.lv/dizains-un-tehnologijas>

Design kit



Build a Team

An interdisciplinary mix of thinkers, makers, and doers is just the right combination to tackle any design challenge.

Human-centered design works best with cross-disciplinary teams. You could put three business designers to work on a new social enterprise, but if you throw a graphic designer, a journalist, or an industrial designer into the mix, you're going to bring new modes of thinking to your team. It's smart to have a hunch about what kind of talent your team will need—if you're designing a social enterprise, a business designer is probably a good bet—but you won't get unexpected solutions with an expected team.

STEPS

- 01** | First, assess how many team members you'll need, your staff's availability, and when your project should start and end.
- 02** | Look at the core members of your team and determine what they're good at and what they're not so good at.
- 03** | Is there a clear technical capability that you'll need but don't currently have—maybe a mechanical engineer, a graphic designer, a skilled writer? Remember that you can always add a team member for a shorter period of time when their skills are most important.

TIME
60 minutes

DIFFICULTY
Hard

WHAT YOU'LL NEED
Pen, paper

PARTICIPANTS
Project lead, partner organizations

Design kit ir apkopotas dažādas iedvesmošanās, radīšanas, pārbaudes, domāšanas metodes, kuras var pielietot mācību stundās 1:1 vai uzdotot kā ilgāku ilgtermiņa darbu. Katrai metodei aprakstā ir noteikti soļi, kas ir jāizpilda un laika rāmis, kuru jāievēro.

<https://www.designkit.org/methods>



Photojournal

Photos are a fantastic way to learn about a person's life, especially if they're the one taking them.

STATS

Suggested Time

2-7 days

Level of Difficulty

Medium

Materials Needed

Camera (smartphone, Polaroid, disposable camera)

Participants

Design team, person you're designing for

PROCESS PHASE



INSPIRATION

IDEATION

IMPLEMENTATION

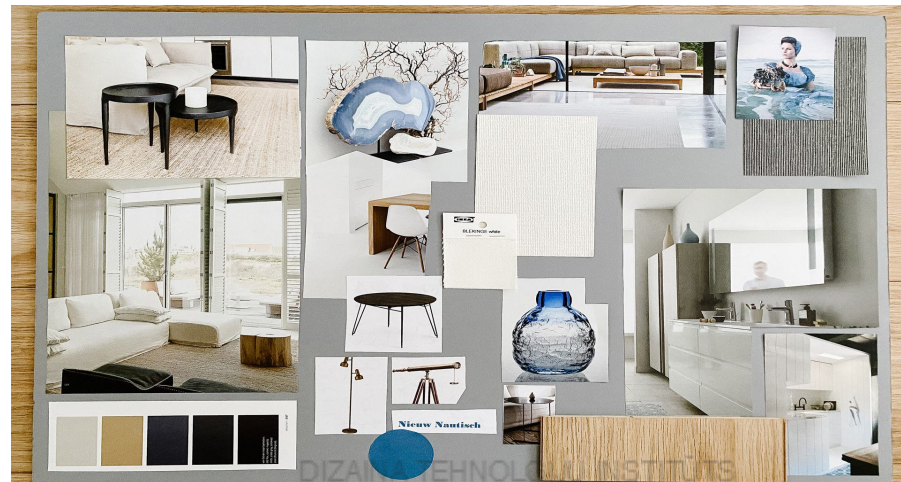
A Photojournal is a straightforward and very visual way to get a glimpse into how a person lives his or her life and also helps empower individuals to tell their own stories. With just a simple prompt and a few instructions, you can get a view into someone's life that you simply couldn't get on your own. We use this method to go beyond an in-person Interview to better understand a person's context, the people who surround them, community dynamics, and the journey through how they use a product or service. Photojournals can help create a foundation for richer discussion as they prime an individual before an Interview which means they start thinking about the subject a few days in advance.

STEPS

- 01** This method can take a couple days to come to life, so make sure that you've allocated enough time in advance of a scheduled Interview to make it work. The goal is to capture everyday moments and dynamics.
- 02** Give the person you're designing for a camera (if they don't have one) and a prompt. If you're designing a financial service you might ask the person to take pictures of everyone who influences their financial decisions. Or you could ask them to take a picture of all the places where they handle finances.
- 03** Once the person you're designing for has taken the photos, get them developed, or have them send it to you digitally in advance of the scheduled interview.
- 04** Photojournals allow you to actually preview a piece of your Interview, so spend some time with the pictures and develop a few questions you'll want to ask based on what you see.
- 05** When you're together, ask the person to walk you through the photos they took, and what they mean. Probe into the "why" behind each photo, dig into how they feel about the photos, and don't forget to ask what they decided to leave out and why.



miro





Top Five

This easy synthesis tool can help you prioritize, communicate, and strategize with your team.

STATS

Suggested Time

30 Minutes

Level of Difficulty

Easy

Materials Needed

Pens, Post-its

Participants

Design team

PROCESS PHASE



INSPIRATION

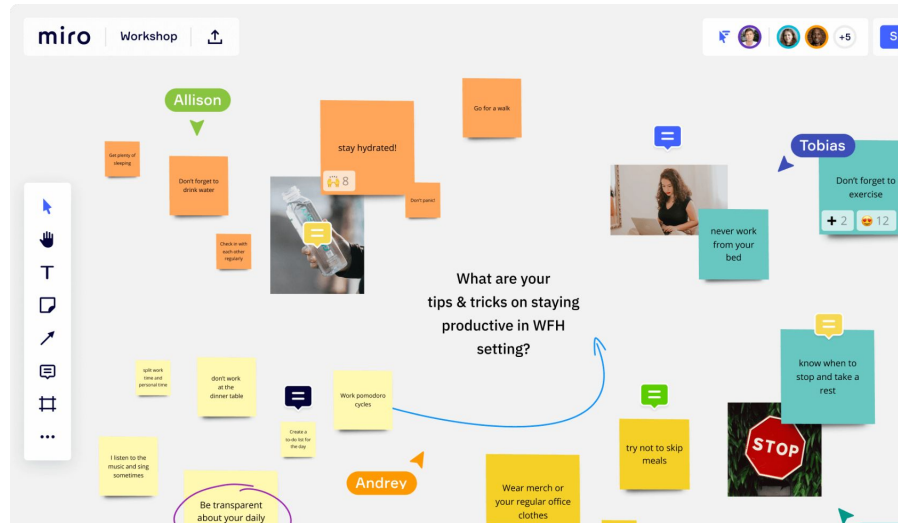
IDEATION

IMPLEMENTATION

Ideation is a tough and heady phase of the human-centered design process. This simple exercise gives you a break from the deep thinking and simply asks, what are the top five ideas or themes sticking out to you right now. Not only can answering this question as a team help you strategize, but it can also help uncover themes, isolate key ideas, and reveal opportunities for design.

STEPS

- 01 | Gather your team and have everyone write down the top five ideas jumping out at them.
- 02 | Share your top fives and cluster similar ideas. This is a great way to reveal what's most interesting or important at a given time.
- 03 | Consider doing this exercise often. And vary the timeframe. What's your team's top five for the day? How about for the week? You can also use this tool to pull out the top five biggest challenges you face, or the top five crazy ideas you want to try.
- 04 | Keeping and displaying the Post-its with your top fives is also a great way to watch your project evolve and to remind yourself of your priorities.



Create a Pitch

Now that your idea is pretty well set, you'll want to communicate it to funders, partners, consumers, everyone!

STATS

Suggested Time

90-120 Minutes

Level of Difficulty

Moderate

Materials Needed

Pens, Post-its

Participants

Design team

PROCESS PHASE



INSPIRATION

IDEATION

IMPLEMENTATION

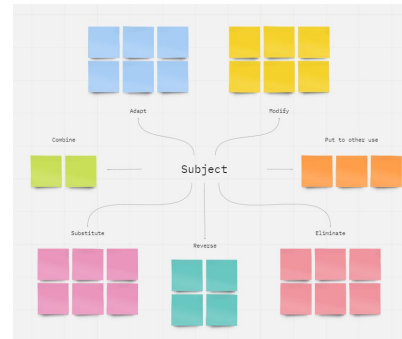
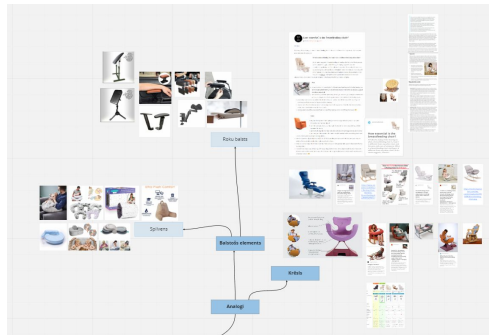
A pitch is a great way to communicate your idea, how it works, why it counts, and who it benefits. And in the process of making it, you'll clarify the key elements of your idea and refine how you talk about them. A pitch is a primary way that you'll present your idea, and you'll be using it to convince different types of people—from banks to potential customers—to rally to your cause.

STEPS

- 01** The first thing you'll want to articulate is the essence of your product, service, or experience. Offer context, the main thrust of your idea, why it's different, and any call to action you're making. Try to succinctly explain it in less than a minute.
- 02** You'll want your pitch to be clear and unambiguous, so don't get bogged down in the details. Sell your idea by sharing how and why it counts.
- 03** Next you'll want to get that story into some kind of format. It could be a pamphlet, a website, a book, or a presentation. You may need more than one. You may need a graphic designer or writer to help.
- 04** You'll likely communicate differently with different audiences. Make sure you that as you Create a Pitch you think about telling stories of varying lengths and in varying degrees of detail. What are the short, medium, and long versions of your pitch?



Miro



Veidot domu kartes, apkopot izpētes informāciju izmantojot iebūvētas sagataves vai veidojot savu unikālu shēmas veidolu.



Lielākais ieguvums - nepazaudē savu veikto. Domu karti var papildināt un rediģēt neierobežotu skaitu reižu. Var strādāt komandā. Pasniedzējs - pārskatīt jebkurā laikā.



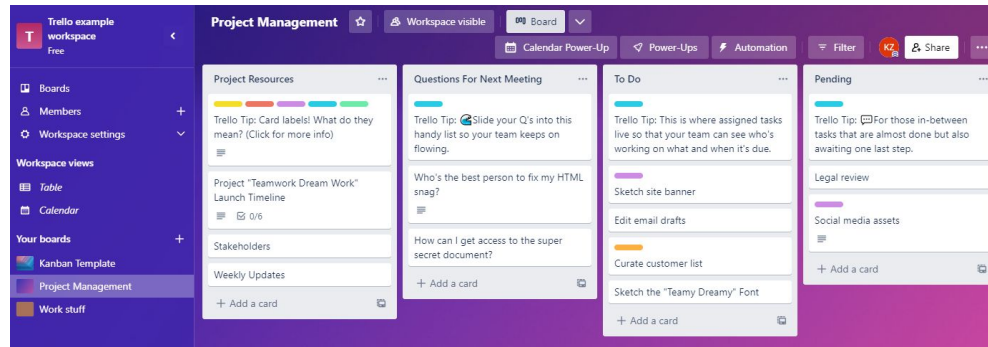
Bezmaksas
reģistrēties



Nav vecuma
ierobežojuma

<https://miro.com/>

Trello



Strādājot komandā nepieciešams plānot uzdevumus, sadalīt atbildības un fiksēt jau izdarīto. Trello iespējams veidot gan Kanban, gan Gantt tipa plānus, kā arī izmantot daudz citu rīku.



Bezmaksas
reģistrēties



Nav vecuma
ierobežojuma

<https://trello.com/>

Prezi



Prezentāciju veidošanas metode - rīks ar citādu pieeju nekā klasiski PowerPoint līmenī. Prezentācija tiek veidota kā viena liela izklājlapa ar vizuāliem elementiem, kurus pietuvinot un attālinot veidojas stāsts.



Bezmaksas
reģistrēties



Nav vecuma
ierobežojuma

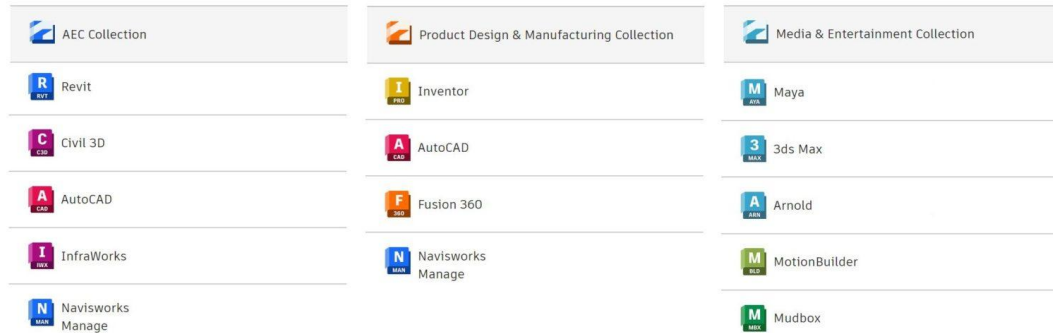
<https://prezi.com>

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<https://www.autodesk.com/education/edu-software/>

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<p>Tinkercad</p> <p>Simple 3D design and 3D printing app</p> <p>Platform: </p> <p>Get product ></p>	<p>Fusion 360</p> <p>Software or Browser Access</p> <p>Cloud-based CAD, CAM, CAE, and PCB software. Continue for access, then install Fusion 360 (multiple languages available) or run Fusion 360 from fusion.online.autodesk.com</p> <p>Platform: </p> <p>Get product ></p>	<p>Revit</p> <p>Plan, design, construct, and manage buildings with powerful tools for Building Information Modeling.</p> <p>Platform: </p> <p>Get product ></p>	<p>Revit</p> <p>Revit Generative Design</p> <p>Note: this product requires Autodesk Revit 2021.</p> <p>Quickly generate design alternatives based on your goals, constraints, and inputs to give you higher-performing options for data-driven decision making.</p> <p>Platform: </p> <p>Get product ></p>
<p>AutoCAD</p> <p>Software for 2D and 3D CAD. Includes access to AutoCAD Architecture, Electrical, Mechanical, Map3D, MEP, Plant 3D and AutoCAD Raster Design</p> <p>Platform: </p> <p>Get product ></p>	<p>AutoCAD for Mac</p> <p>Software for 2D and 3D CAD</p> <p>Platform: </p> <p>Get product ></p>	<p>AutoCAD Web</p> <p>Draft, annotate, and add field data to your drawings online via your web browser or mobile device. Access and edit DWG files, and quickly collaborate with AutoCAD users on designs.</p> <p>Platform: </p> <p>Get product ></p>	<p>Inventor Professional</p> <p>Professional-grade product design and engineering tools for 3D mechanical design, simulation, visualization and documentation</p> <p>Platform: </p> <p>Get product ></p>
<p>3ds Max</p> <p>3D modeling, animation, and rendering software for games and design visualization</p> <p>Platform: </p> <p>Get product ></p>	<p>Maya</p> <p>3D animation, modeling, simulation, and rendering software for film, games, and TV</p> <p>Platform: </p> <p>Get product ></p>	<p>Advance Steel</p> <p>3D modeling software for steel detailing</p> <p>Platform: </p> <p>Get product ></p>	<p>Alias AutoStudio</p> <p>Automotive conceptual design, technical surfacing, and visualization</p> <p>Platform: </p> <p>Get product ></p>

<https://www.autodesk.com/education/edu-software/>

TinkerCAD



AUTODESK®
TINKERCAD®



3D CAD modeļu veidošana un rasējumu sagatavošana. Rezultātu var pielietot, piemēram 3D drukāšanā.



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reģistrējoties



7 - 15 g.vec.

<https://www.tinkercad.com>

AutoCAD Web



AutoCAD Web



2D rasējumu sagatavošana vienkāršām detaļām, produktiem vai telpām.

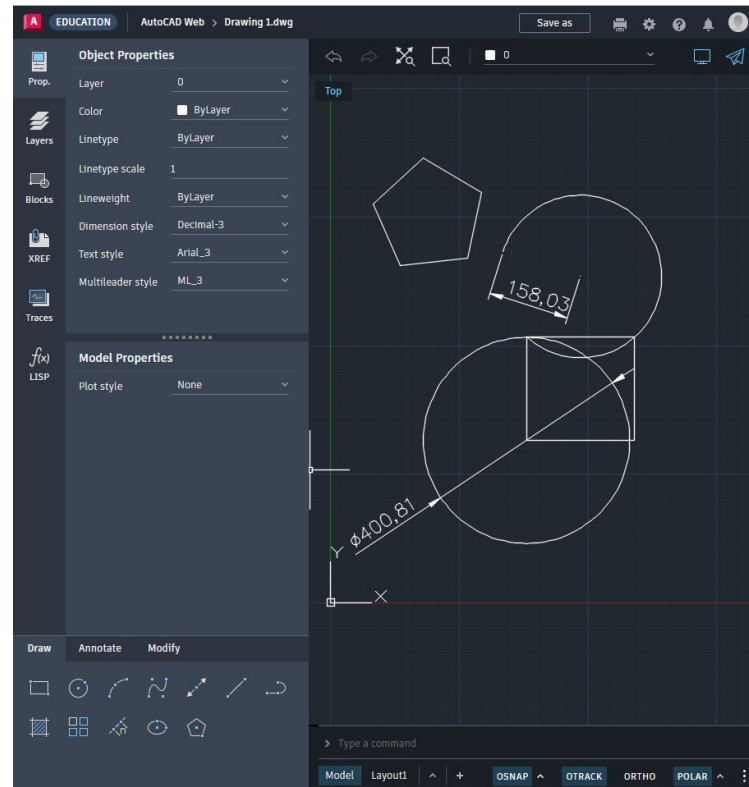


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/ skolotāja
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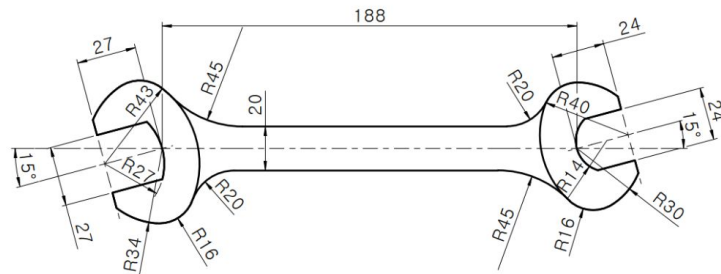


10 + g.vec.

<https://web.autocad.com/>



AutoCAD Web



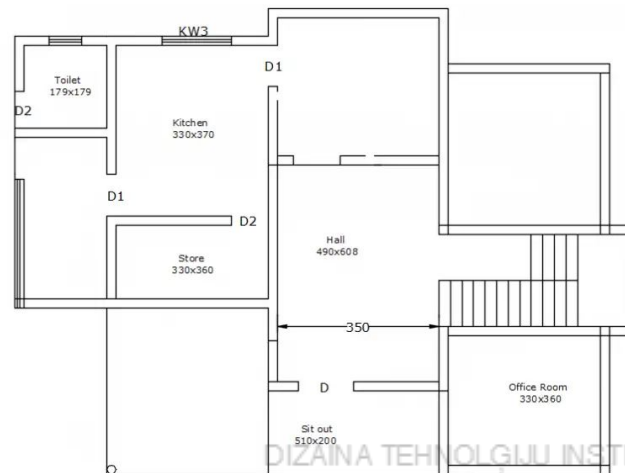
2D rasējumu sagatavošana sarežģītākām detaļām, produktiem vai telpām. Arī 3D modeļu sagatavošana. Vizualizāciju veidošana.



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/ skolotāja
licenci



12 + g.vec.



AutoCAD pilnā programmas versija



2D rasējumu sagatavošana sarežģītākām detaļām, produktiem vai telpām. Arī 3D modeļu sagatavošana. Vizualizāciju veidošana.

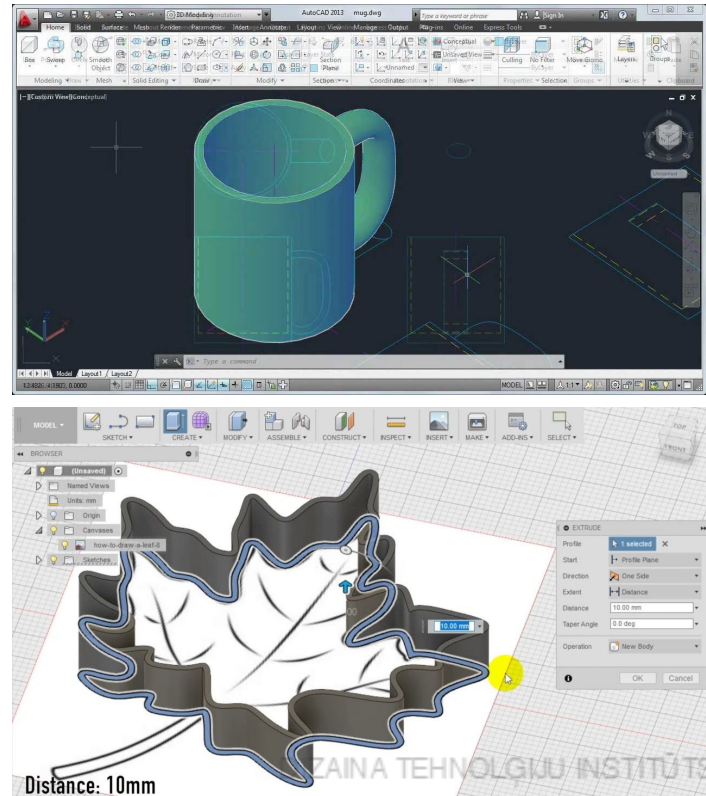
Nepieciešams instalēt uz datora!



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12 + g.vec.



Fusion 360



Pamatā 3D modeļu veidošanai. Modeļi var sastāvēt no vairākām daļām, piemēroti 3D drukāšanai vai citām izgatavošanas tehnoloģijām.

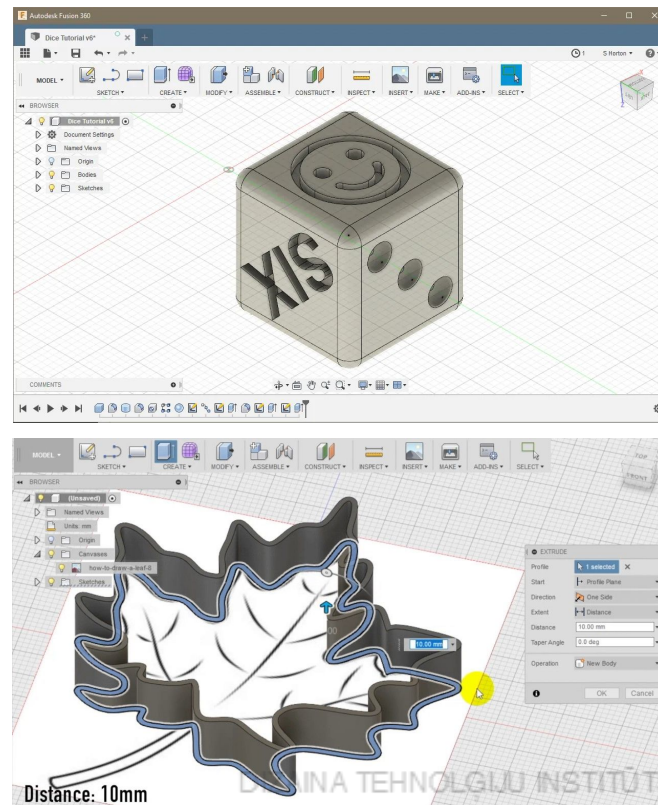
Nepieciešams instalēt uz datora!



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12 + g.vec.



SketchUP



3D brīvformas objektu un telpu modelēšanas rīks. Papildināts ar bagātīgu gatavo objektu bibliotēku, lai nebūtu jāveido viss no nulles.

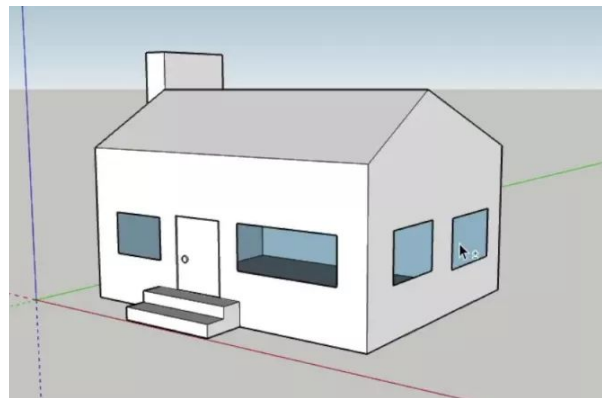
Jebkurš skolēns var uzmodelēt, piemēram, savas sapņu istabas iekārtojumu.



Bezmaksas
reģistrēties



14 + g.vec.



<https://app.sketchup.com/app>

CATEGORY

Category

All Categories ▾

Subcategory ▾

PROPERTIES

File Size

0 - 100 MB

Polygons

0 - MAX

ADVANCED

[Reset All Filters](#)

TABLE #45

✓ RENDUS | ARMOIRES CUISINES A...



table wood

OUTREQUIN A.



lasa table

✓ TON design



CIRCOE TABLE

✓ KATE Jānis Meūlis



Table #14

✓ RENDUS | ARMOIRES CUISINES A...



Side Table

✓ Lucas Design Associates



Table Jeremy

✓ MAM La Fabrica de Muebles



TABLE #38

✓ RENDUS | ARMOIRES CUISINES A...



Mint Table

✓ SIXINCH



TABLE #41

✓ RENDUS | ARMOIRES CUISINES A...



Table #16

✓ RENDUS | ARMOIRES CUISINES A...



table ironica

✓ TON design



TABLE #01



TABLE #10



Folding Table



MARZANA TABLE



3D warehouse
pieejama plaša gatavo
objektu bibliotēka



Meshes		
Base_Cylinder.001		
Schienale_Circle.004		
Aggancio_Cube.003		



Dažādu failu veidu 3D objektu apskatīšanai var izmantot šo lapu

Details

Vertices:	158,557
Triangles:	315,904
Size X:	0.59
Size Y:	0.80
Size Z:	0.55
Volume:	Calculate...
Surface:	Calculate...

Citas populāras gatavo 3D objektu bibliotēkas:

- <https://gallery.autodesk.com>
- <https://grabcad.com/dashboard>
- <https://3dwarehouse.sketchup.com/?hl=en>
- <https://dwgfree.com/product-tag/autocad-3d/>
- <https://www.polantis.com>
- <https://www.cadblocksfree.com/en/3d-cad-models.html>
- <https://www.bibliocad.com/en/>
- <https://www.turbosquid.com/Search/3D-Models/autocad>

Materials (1) >

<https://3dviewer.net>

OnShape



3D CAD jaunrades rīks ar iespēju strādāt komandā. Uzsvars uz rīkiem, kas ir pietuvināti reāliem priekšmetu izgatavošanas principiem.

Nav nepieciešams instalēt!

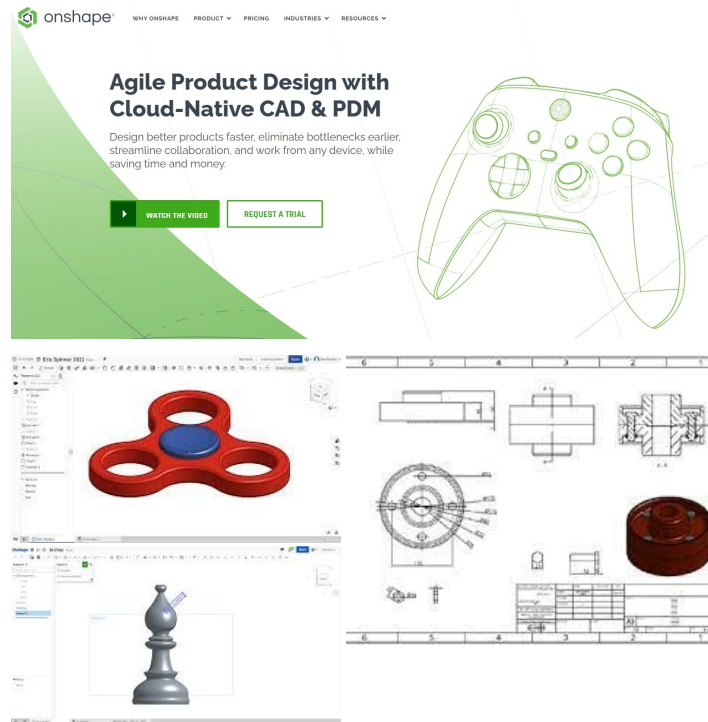


Bezmaksas reģistrējoties un piesakot licenci



14 + g.vec.

<https://www.onshape.com/en/>





What is **Onshape?**

Blender



3D CAD jaunrades rīks. Intuitīvs un viegli apgūstams. Bezmaksas iespējas instalēt uz sava datora.

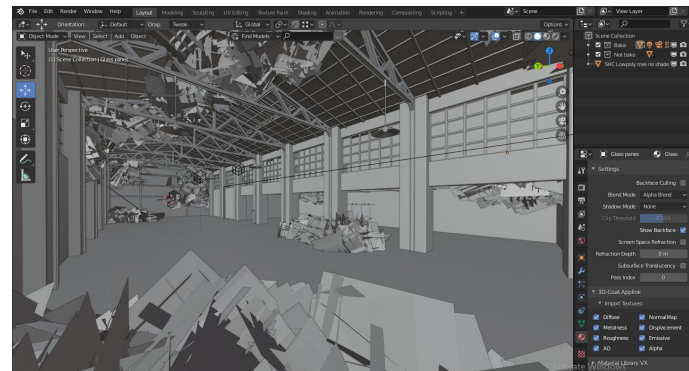
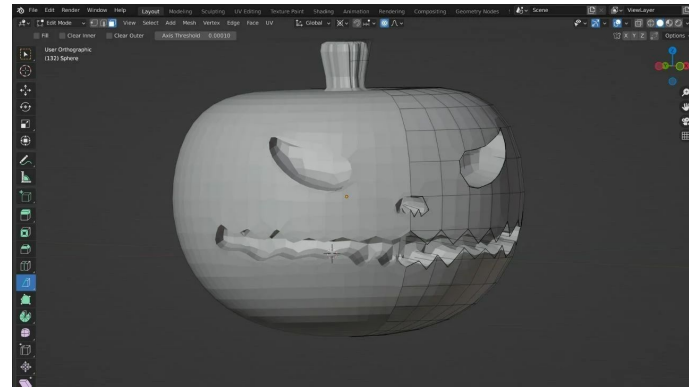


Bezmaksas lejupielādējot un instalējot

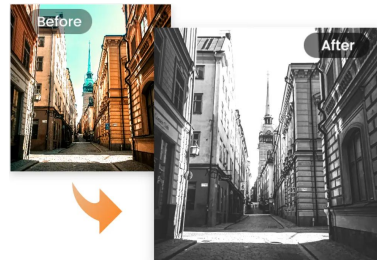
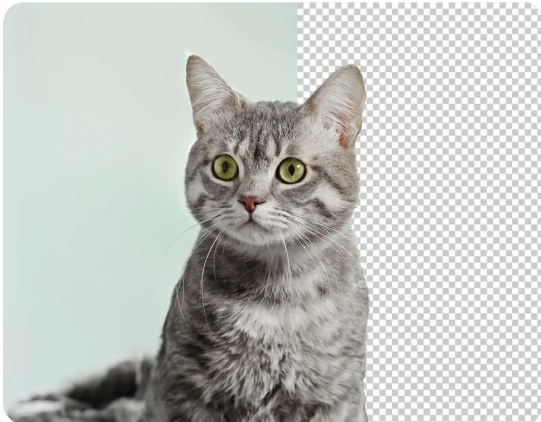
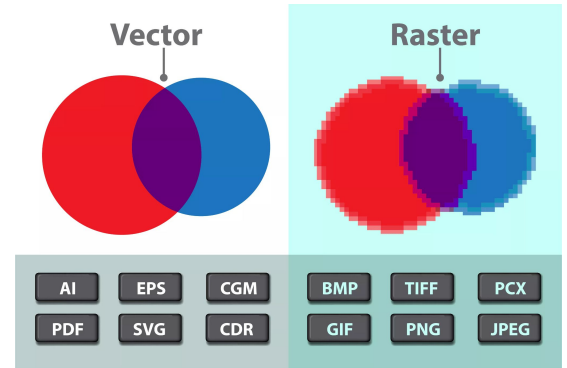
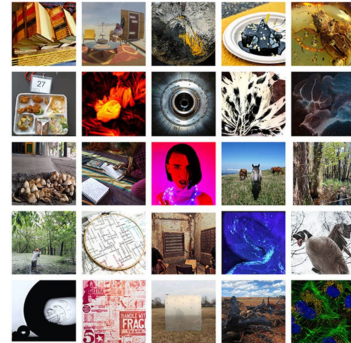
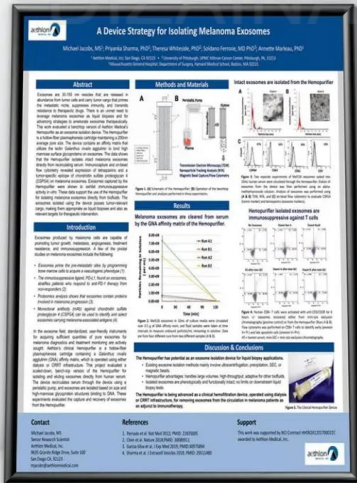


16 + g.vec.

<https://www.blender.org/>



INSTITŪTS



Rastragrafikas



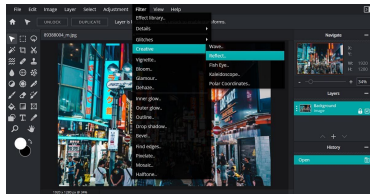
Rastragrafikas attēlu apstrādei ir ļoti daudz iespējamo rīku. Pat tālrunu aplikācijās. Taču Photoshop un Gimp līdzīgākie ir sekojošie:



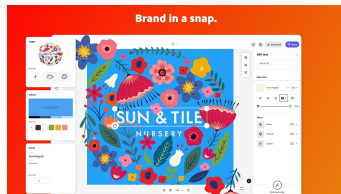
Bezmaksas pat bez reģistrācijas



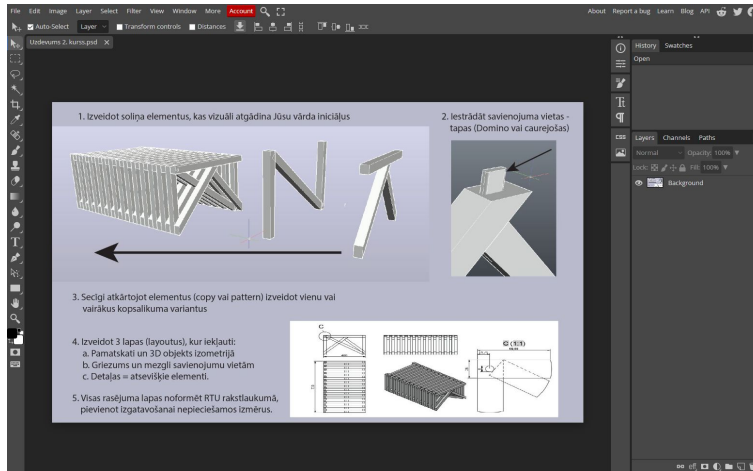
Nav vecuma ierobežojuma



<https://pixlr.com/>



<https://express.adobe.com>



<https://www.photopea.com>

Gimp

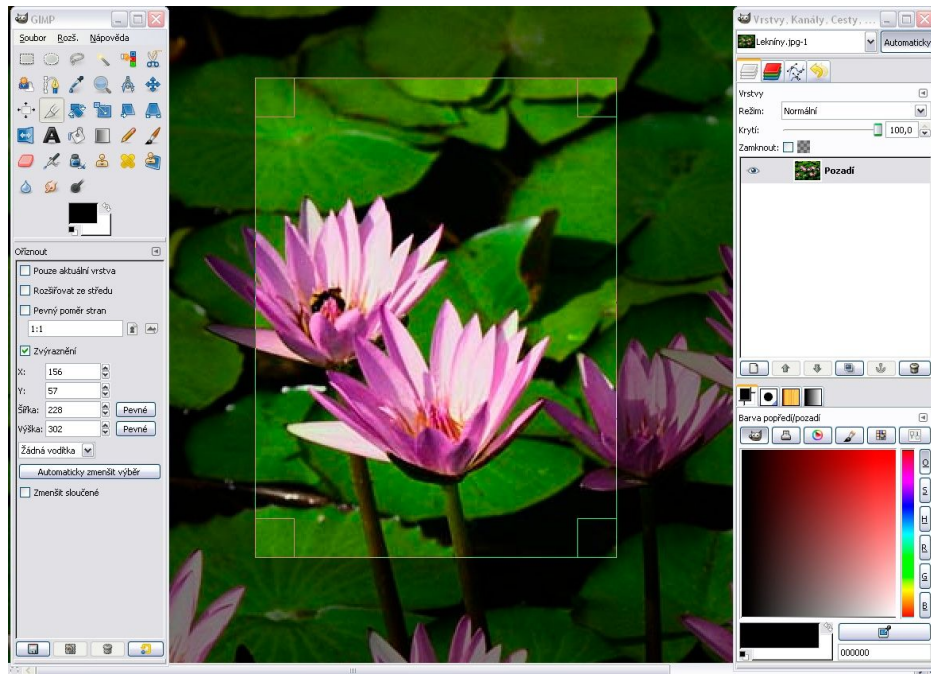


Atvērta-koda tipa
programma rastragrafiku
zīmēšanai un rediģēšanai.
Bezmaksas analogs
Photoshop.



Bezmaksas
lejupielāde

<https://www.gimp.org>



Vektorgrafikas



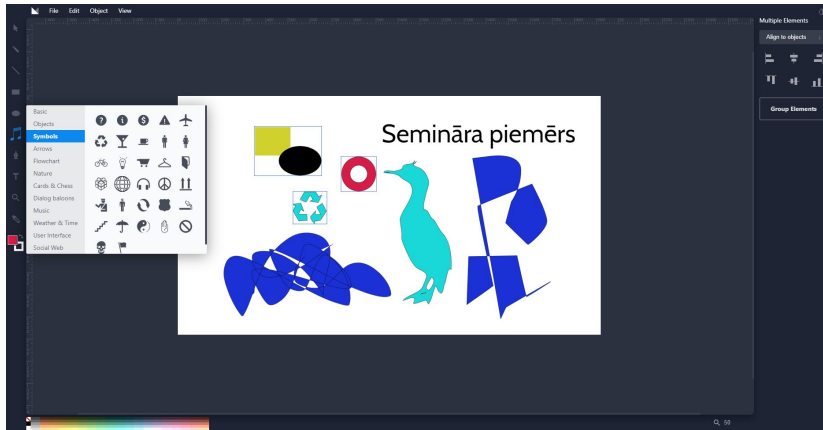
Vektorgrafikas programmu aizstājēji ar ierobežotāku funkcionalitāti, taču pilnībā derīgi, lai izveidotu un demonstrētu savu grafisko ideju, tēlu, logotipu, zīmolu u.c.



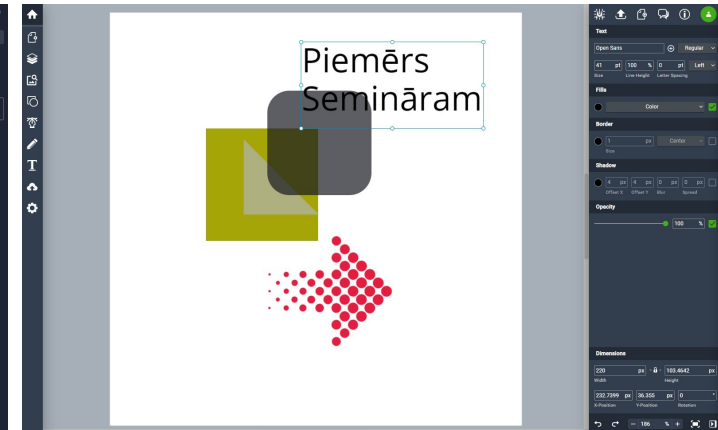
Bezmaksas pat bez reģistrācijas



Nav vecuma ierobežojuma



<https://editor.method.ac>



<https://vectr.com/design/>

Inkscape

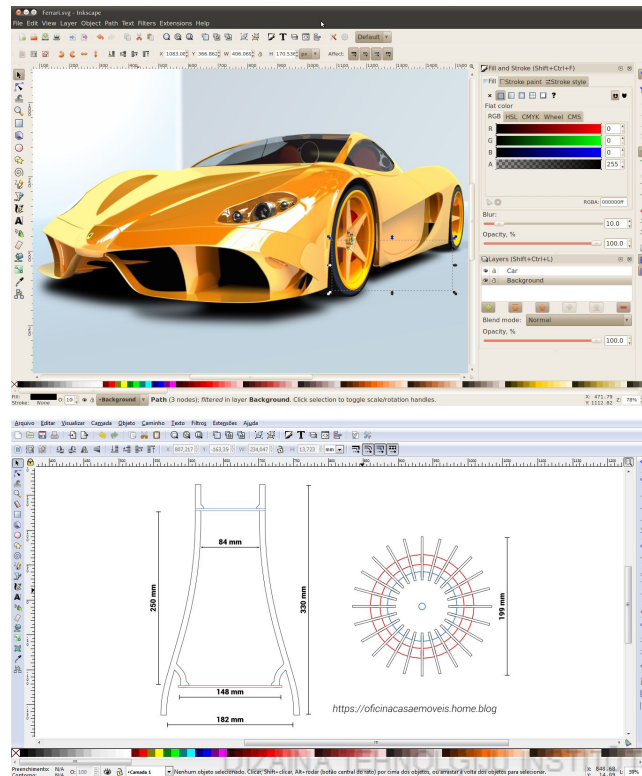


Atvērta-koda tipa programma vektorgrafiku zīmēšanai un rediģēšanai. Bezmaksas analogs Illustrator un Corel Draw



Bezmaksas
lejupielāde

<https://inkscape.org>



Portfolio veidošana

Portfolio veidošana jau skolas laikā var noderēt vēlāk iestājoties kādā nākamās pakāpes mācību iestādē vai pretendējot uz kādu darba vietu.



Portfolio veidošanu var īstenot gan apkopojot viena mācību gada laikā paveikto, gan ilgākā laika posmā iespēto.

Šis palīdz novērtēt laika gaitā skolēna demonstrēto izaugsmi un "rokraksta" veidošanos.

Canva

<https://www.canva.com/create/portfolios/>



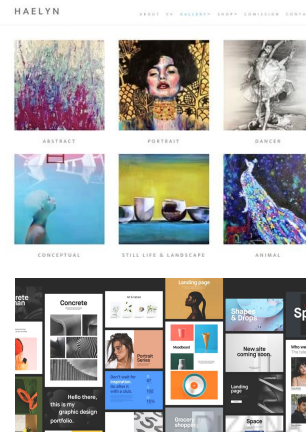
<https://crevado.com/>

flickr

<https://www.flickr.com>



<https://www.behance.net>





James Connors

Industrial Designer

Brooklyn, NY, USA

Follow

Message

Project Views	52,765
Appreciations	3,066
Followers	1,498
Following	277

ON THE WEB

LinkedIn

Instagram

WORK EXPERIENCE

Industrial Designer
Freelance — NY, USA

Industrial Designer
Limited Brands — Garden City, NY, USA

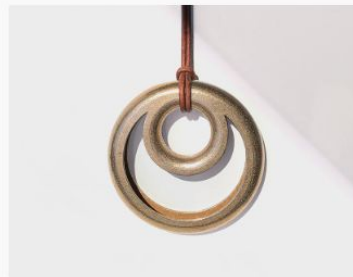
Industrial Design Intern
Quirky — New York, NY, USA

[View Full Resume](#)

ABOUT ME

Industrial Designer based out of Brooklyn. Inspired by good music, samurai jacks and yo-yos.

Work Moodboards Appreciations



Sawara



KitchenAid

<https://www.behance.net/jamesconnors>

DIZAINA TEHNOLOGIJU INSTITUTS

Contact

nicholas@baker.studio
instagram / tatlter

Nicholas Baker Studio
Brooklyn, New York
4:56:00 AM

Bio

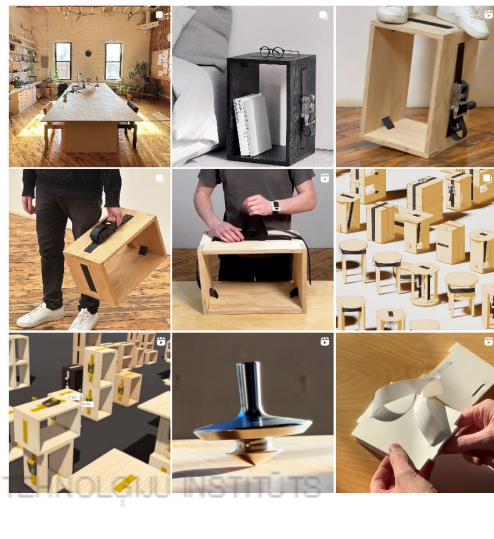
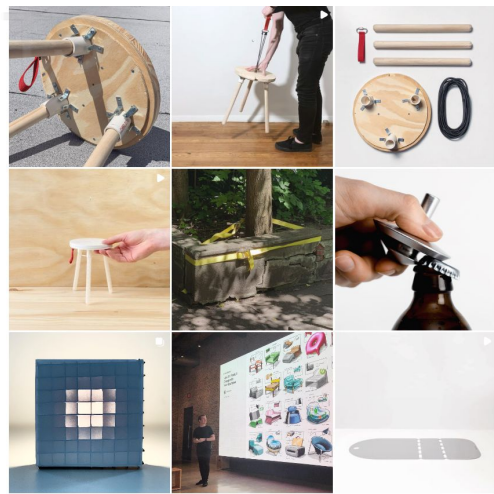
Nicholas Baker is a Brooklyn-based designer born and raised in North Carolina. After graduating from Savannah College of Art and Design, Baker began his professional career designing for a pet company and freelancing in his spare time. In 2017, Baker moved to New York City to start his design studio. Today, Nicholas Baker Studio focuses on designing furniture, lighting, housewares, and everyday objects.

About

Nicholas Baker Studio was founded with one simple philosophy:
design objects that embrace a delightful future.

"In order to build a better future we must believe in one. At the studio, we explore new ideas and technologies with the goal of making those ideas approachable. It could be virtual reality, blockchain, a new material, or a clever mechanism. We take these explorations and distill them down into delightful objects that push the boundaries of design. Every object, no matter how small, is a moment to make someone smile and craft an optimistic world. We aim to inspire this delightful future in us, our clients, and everyone who encounters our designs."

Read more about the studio mission.



<https://www.baker.studio/>

Bezmaksas fonti



Google fonts ir bezmaksas fonu bibliotēka, kurus var izmantot gan grafisko dizainu veidošanā, gan programmēšanas uzdevumos.

Pēc fonu lejupielādes un pieinstalēšanas, tie automātiski parādās visās uz datora instalētajās programmās.

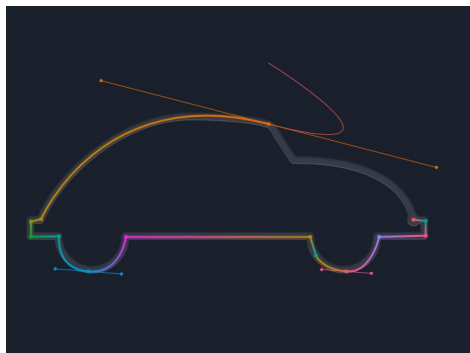
<https://fonts.google.com>

The screenshot shows the Google Fonts search interface. At the top, the Google Fonts logo is visible. Below it, there's a search bar with the text 'Skolotāju seminārs' entered. The search results are displayed in a grid of font preview cards. Each card shows the font name, the designer's name, and the number of styles available. The text 'Skolotāju seminārs' is displayed in the font's style. The results include:

- Roboto** by Christian Robertson (12 styles)
- Noto Serif Leo** by Google (Variable)
- Rubik Iso** by Nik, Luke Prowse (1 style)
- Golos Text** by Aleksandra Korolkova, Vitaly Kuzmin (Variable)
- Open Sans** by Steve Mattsson (Variable)
- Noto Sans Japanese** by Google (6 styles)

Treniņrīki neparastākām nodarbībām

Treniņuzdevumi - iezīmēt konkrētas formas izmantojot vektorgrafikas zīmēšanas rīku "Pen"



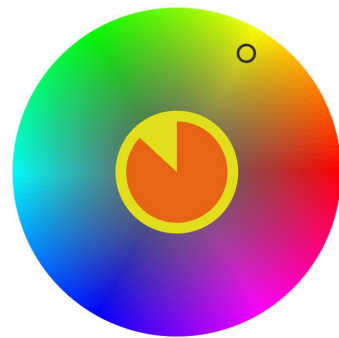
<https://bezier.method.ac>

Spēle - Burtu optisko attālumu pielāgošana dažādiem vārdiem.



<https://type.method.ac>

Spēle krāsu līdzību un precizitātes noteikšanai.



<https://color.method.ac>

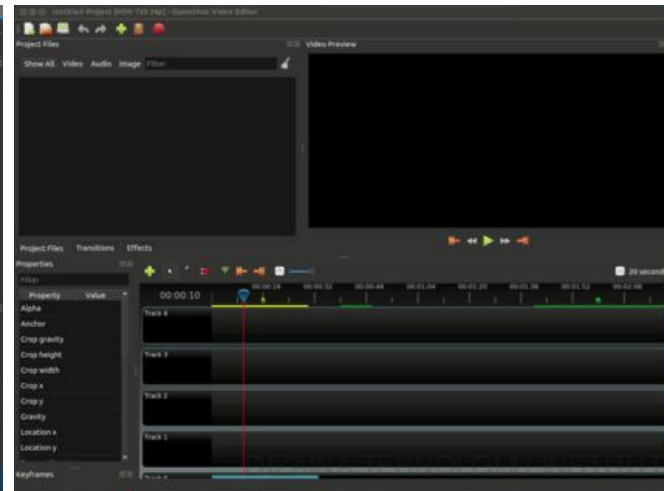
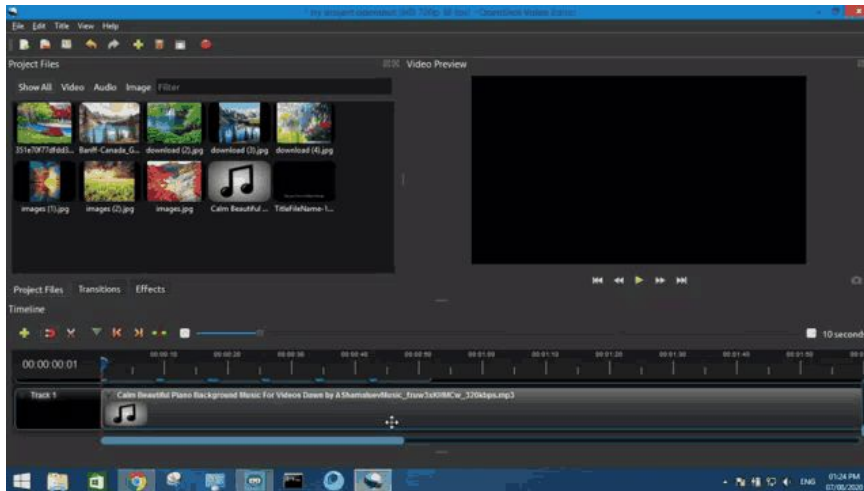
Video veidošana



OpenShot video veidošanas un rediģēšanas programma ir atvērta koda tipa, bez maksas. Funkcionalitāte ir mazliet ierobežotāka nekā populārākajām programmām, kā piemēram, Adobe Premiere vai Sony Vegas / Vegas Pro, taču pilnībā pietiekama, lai radītu jaunu saturu un skolas līmeņa video. Intuitīvs pogu izvietojums.



<https://www.openshot.org/>



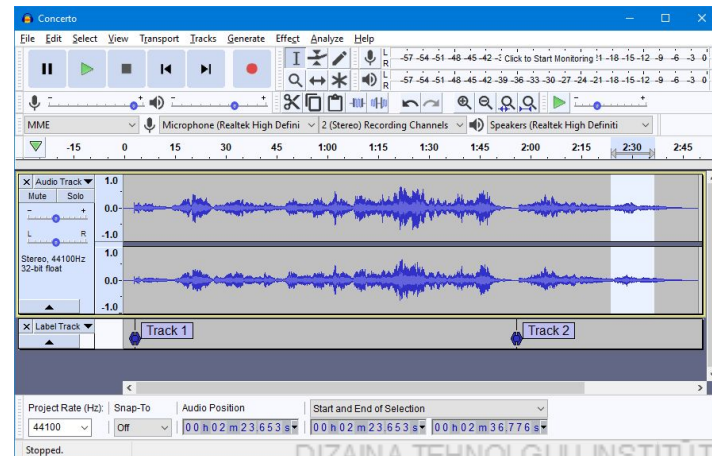
Audio apstrāde



Audacity ir atvērta tipa koda programma, pieejama bezmaksas lejupielādei un instalēšanai uz personīgajiem vai skolas datoriem. Tajā iespējams veikt audioceliņu apstrādi jau iepriekš veiktiem runas vai dziesmu ierakstiem, kā arī ierakstīt jaunu saturu. Iespējams apvienot vairākus skaņu celiņus kopā, veikt izgriešanu utt.



<https://www.audacityteam.org>



x=y^3+34-y plot

NATURAL LANGUAGE MATH INPUT EXTENDED KEYBOARD EXAMPLES UPLOAD RANDOM

Assuming "plot" is a plotting function | Use as referring to geometry instead

Input interpretation

plot $x = y^3 + 34 - y$

Plots

(y from -3.5 to 1.5)

(y from -5.9 to 5.9)

Download Page POWERED BY THE WOLFRAM LANGUAGE

Related Queries:

- integrate $y^3 + 34 - y$
- plot $1/(y^3 + 34 - y)$
- $y^3 + 34 - y$ vs differentiate $y^3 + 34 - y$
- plot $\ln|y^3 + 34 - y|$
- take image convolution image of $y^3 + 34 - y$

density measurement

NATURAL LANGUAGE MATH INPUT EXTENDED KEYBOARD EXAMPLES UPLOAD RANDOM

Interpreting "measurement" as "measurement"

Input interpretation

mass density measurement devices

Measurement devices

capacitance displacement sensor | dasymeter | densimeter | density cup | gas pycnometer | oscillating U-tube | pycnometer | salinometer (total: 8)

Description

capacitance displacement sensor	A non-contact device that measures the position and change of position of a conductive target.
dasymeter	A densimeter used to measure the density of gases.
densimeter	An instrument used to measure density or specific gravity.
density cup	An instrument that is used to ensure quality control in a paint or lacquer. It does this by measuring the density of the paint or lacquer and comparing this density with that of a standard for that paint or lacquer.
gas pycnometer	A laboratory device used for measuring the density and volume of solids.
oscillating U-tube	A technique to determine the density of liquids and gases based on an electronic measurement of the frequency of oscillation.
pycnometer (generic)	A device used to determine the density of a liquid.
salinometer	A device designed to measure the salinity, or dissolved salt content, of a solution.



Can a neural network learn to recognize doodles?
See how well it does with your drawings and help teach it,
just by playing.

<https://quickdraw.withgoogle.com>

Paldies par uzmanību!



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