TUDOR BERECHET
RESUMÉ

TOOLS, SKILLS, BUZZWORDS

Unity3D / C# / ECS
UE4, UE3 / C++
SteamVR, Valve Index, HTC Vive, OculusVR,
Quest/Go/Rift, MS HoloLens, MagicLeap

Git, Docker, CI/CD
Agile, Scrum, Trello, Taskworld, Harvest
Latex

Languages

C#
C++, C
CG, HLSL, GLSL
Python
Processing
Lua, Javascript,
Rust, php, Matlab

Technologies

.NET, Azure, WPF, Xamarin
OpenGL, DirectX, WebGL
Direct Compute / GPGPU,
Cuda, QT, GLUT
TCP/IP, UDP, WebSockets
Pytorch

Adobe

Photoshop
Premiere, AfterEffects

3D

Cinema4D,
Sculptris
Blender, BPython

EXPERIENCE AND STUDIES   7 YEARS OF INDUSTRY,
7 YEARS OF UNIVERSITY,
17 YEARS OF PROGRAMMING

Work (part time → full time)   (october 2020 - ongoing)

Senior Graphics Programmer at Cylindo (Chaosgroup) (https://www.cylindo.com). Automation of 3D / Web / XR pipeline for product visualization, catalogue, design validation. ←(https://www.cylindo.com)

Graphics programming stacks, web technologies, streaming, post processing, content generation, automation, reusability, game engines, grading software etc.

Work (startup, part time + ↓)   (february 2020 - june 2021)

Software Engineer on Prediagnose (https://www.prediagnose.com/). Building and assembling tech stacks for secure handheld hardware bio-sampler sensors, app, and cloud data analysis & automated diagnosing of bacteria, COVID-19, pollutants. ←(https://www.prediagnose.com/)

.NET, Xamarin.Forms, Auth0 tokens, MS Azure stack, Shared Access Signatures storage containers, databases, GDPR, PalmSens.
- TED Talk on the biotech (https://www.youtube.com/watch?v=mzmvHQYRVMc) ❤ ←(https://youtu.be/mzmvHQYRVMc)

Steam Early Access, VR (indie work)   (2020)

VR & Graphics stack developer on Graffiti Bombing (https://store.steampowered.com/app/561440/Graffiti_Bombing/). V1 in Steam beta.
An upcoming high fidelity VR volumetric Graffiti Simulator with only moderate amounts of high ambitions.❤ ←(https://store.steampowered.com/app/561440/Graffiti_Bombing/)

Unity3D 2019.2, volumetric data structures & SDF raytracing, recordable lag-proof uninterrupted lines, ECS, VR interactions, networking-agnostic code, data/texture/LoD streaming, DirectX11+ (for now), custom renderers, command buffers.

PCG Advisor, Branching Sickness (indie work) (summer - winter 2020)

Invited to be a Procedural Content Generation advisor on Branching Sickness (https://twitter.com/SicknessGame) on incorporating my published paper (http://julian.togelius.com/Mark2015Procedural.pdf). A Halo Flood fan game with a huge team of devs & volunteers.
←(https://twitter.com/SicknessGame)
←(http://julian.togelius.com/Mark2015Procedural.pdf)

Unity3D -> UE4, PCG, Voxels, Compute, Grammar System Structure, Distance Fields, Additive Noise.

Work (full time, part time + ↑)   (february 2017 - september 2020)

VR Game Developer at Khora VR (http://khora-vr.com/) (games, simulations, healthcare, art, b2b productions, and DK's first VR arcade).
←(khora-vr.com/)

Gameplay, Software, Tools, Graphics Programming. Early adoption for virtually every headset on the market.
Sample project videos:
- VR Raytraced Compute Sculpter (https://www.youtube.com/watch?v=p2nTPQErlqI&feature=youtu.be) ←(youtu.be/p2nTPQErlqI)
- Optimized Exposure Therapy Streaming Platform for Oculus Go (https://youtu.be/h93L_TTokcc) ←(https://youtu.be/h93L_TTokcc)

Indie Work   (↓ - december 2016)

UE4/C++ custom raytracer (https://twitter.com/CarnegieLemon/status/809951848136404993) with prototype GPU physics for a personal/collab project. ←(twitter.com/CarnegieLemon/status/809951848136404993)

Indie Work, VR   (september 2016 - ↑)

VR particle sculpting tool with fluid dynamics:
deferredreality.com/?project=particles   (?project=particles)
←(deferredreality.com/?project=particles)

Work (full time)   (spring 2015 - summer 2016)

Software Developer at UCS3D (https://www.youtube.com/channel/UCvJGpkkgyLSOTq_3r9KQAqw), Copenhagen. ←(youtu.be/UCvJGpkkgyLSOTq_3r9KQAqw)

Worked on 2 platforms for VR 3D architectural design validation in cityscapes generated from photogrammetry.

App Systems, City PCG pipeline, Custom Lighting Simulation, Point Cloud Data, VR headsets, Gameplay.

Publication: (FDG 2015)

Paper: Procedural Generation of 3D Caves for Games on the GPU (http://julian.togelius.com/Mark2015Procedural.pdf). ←(julian.togelius.com/Mark2015Procedural.pdf)

(deferredreality.com/?project=gpgpu)

Presented at Foundations of Digital Games 2015 (http://www.foundationsofdigitalgames.org/). ←(www.foundationsofdigitalgames.org/)

Voxels, Compute, Grammar System Structure, Distance Fields, Additive Noise.

Work / Internship (full time) (3rd semester of MSc ↓)   (2013 - 2013)

Shipped two mobille / tablet titles. DADIU Productions (30 ECTS).

Danish Academy of Digital Interactive Entertainment, Copenhagen.

Masters   (2012 - 2014)

MSc. in Game Technology (120 ECTS). IT University of Copenhagen (https://en.itu.dk/), Denmark. ←(https://en.itu.dk/)

e.g. Game Engines, Game Development, AI, Game Design, Concept Design, Data Mining, PCG, Graphics Programming, and a bunch of jams, VR, and Dungeons & Dragons :)

"Gap year" Masters   (2011 - 2012)

Took an inspiring break from hard science / CS, with an Industrial Design MFA (60 ECTS). Umeå Institute of Design (http://www.teknat.umu.se/english/news//.cid273128), Sweden. (up with the northern lights) ←(www.teknat.umu.se/english/news/.cid273128)

Product Design, Concept Design, Storytelling, Maker stuff (arduinos, kinects, exhibit & party pieces).

e.g. Interaction Design, Service Design, Product Design, Color Theory, Visualisation Techniques & Storytelling, Ergonomics, Transportation Design, Art History

CPE   (2011)

Certificate of Proficiency in English, level C2. Cambridge ESOL Level 3 International.

Got an A (read: pretty much the toughest English language test)

Bachelors   (2008 - 2011)

BSc. in Computer Science (180 ECTS). A.I. Cuza University (http://www.uaic.ro/), Iași, Romania. ←(http://www.uaic.ro/)

e.g. Network Programming, Compilers, Assembly, Matlab, OOP, .NET, Databases, Graph / Search Algorithms, Artificial Intelligence, Web Technologies, Information Security, Software Engineering, Computer Graphics, Bioinformatics

Highschool   (2005 - 2008)

C and ActionScript

Events, Camps, Misc   (2017 - 2018 - 2019 - Corona -)

Apart from various Web3 & DAO meetups, and VR/XR, tech, & games events (AWE, Unite), in my off time I learn and write about deconstructionism, futurism & futures design, SDGs, and things that help, last, and **can't** do evil (tech + game theory + ethics). ♥

I take part in bootcamps, round table discussions, events and meetups e.g. in:

- Speculative Futures (https://www.futures.design)←(www.futures.design/)
- Founders of Tomorrow (https://foundersoftomorrow.com/) (2019) Impact & Ideation camp (SDG (https://www.un.org/sustainabledevelopment/sustainable-development-goals/)), nonprofit based on the Danish Innovation Institute (https://www.industriensfond.dk/english/about-the-foundation)←(foundersoftomorrow.com/)
  ←(un.org/sustainabledevelopment/sustainable-development-goals/)
  ←(industriensfond.dk/english/about-the-foundation)
- Tech Festival (https://techfestival.co/)←(techfestival.co/)
- TechBBQ (https://techfestival.co/)←(https://techbbq.dk/)

– <u>DareDisrupt (https://daredisrupt.com/)</u>←(https://daredisrupt.com/)

– <u>Ethereum Cph (https://www.meetup.com/Copenhagen-Ethereum-Meetup/)</u> and Web3 & DAO meetups, scheming & consulting.←(https://www.meetup.com/Copenhagen-Ethereum-Meetup/)

I also ❤ the Dungeons & Dragons scene, with the space's theatrical mental improv & exploratory qualities, + I use it for team building, self analysis, and to just like digging it up within the professional world.

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