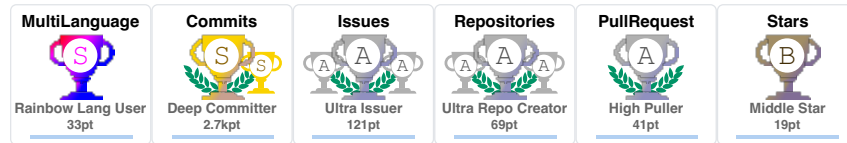


Mateusz Zaremba

Software Engineer

website  Made with 

mat.zar@icloud.com | <https://matzar.github.io/> | Update: Dundee, United Kingdom, 20th



Currently

Working at [asensei](#), a Silicon Valley startup as a software engineer I develop tools in [Angular 15](#) and web components in [StencilJS](#) using [TypeScript](#) and graphics programming with [Three.js](#). I take care of CI/CD pipeline, mentor interns and new employees and lead the tool development team.

Specialized in

[Angular](#), [Ionic](#), [StencilJS](#), [TypeScript/JavaScript](#), [RxJS](#), [Linear Algebra](#), [Quaternions](#), [C++](#), [git bash](#)

Professional accomplishments

During my time at [asensei](#) I have created:

- a custom web component in [StencilJS](#) which integrates [Three.js](#) graphics programming, [quaternion](#) math, [RxJS](#), in-house libraries and ships automatically as an [npm](#) package using [semantic release](#).
- a content building tool - written in [Angular/Ionic](#) - which uses my aforementioned custom web component for 3D graphics used by 2 full-time employees on a daily basis.
- Angular Ionic fitness app with a custom design to easily quickly load exercises from a remote, with video, image and file streaming from dropbox.
- a new version of the in-house markup language along with a content building tool - written in TypeScript and Node.js file system - which has saved 10 to 12 months in developemnt.
- VS Code extension that adds intelli-sense for the in-house markup language.
- Moved projects to Nx workspace, created GitHub re-usable workflows to, ie. build and publish Docker images for Angular apps, run tests, linting, etc. (see my Medium article on how to [Optimize Your Angular Application Deployment with Multi-Stage Dockerfiles in an Nx Workspace](#))
- Improved the workflow of the team with bash aliases and functions [some of the git bash aliases and functions I use everyday](#).

Open Source

[Non-strict format, time to seconds converter distributed via npm](#)

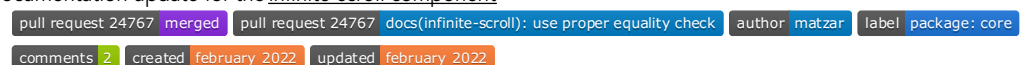


VS Code extension to accompany nand2tetrakis course published on [Visual Studio Marketplace](#)

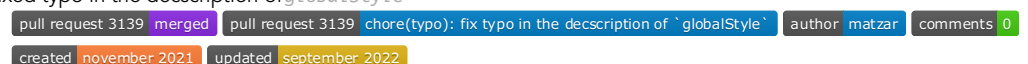


PRs

Documentation update for the [infinite-scroll](#) component



Fixed typo in the description of [globalStyle](#)



Remove build warnings in Stencil example project - [audio-player](#)



updated [october 2021](#)

Documentation update for building Docker Images with private npm packages

[pull request 285](#) merged [pull request 208](#) Update docker-and-private-modules.mdx author [matzar](#) comments [5](#)
created [september 2022](#) updated [october 2022](#)

Replace Google+ with Discord in [space-jekyll-template](#)

[pull request 43](#) merged [pull request 43](#) Replace Google+ with Discord author [matzar](#) comments [1](#) created [march 2019](#)
updated [june 2022](#)

Pink theme for [Xerios'](#) UE4 [LazyTheme](#) with assets prepared by [Justin Meisse](#)

[pull request 1](#) merged [pull request 1](#) Add: Pink LazyTheme author [matzar](#) comments [4](#) created [october 2018](#)
updated [october 2018](#)

Reviewing PRs for Unity's official .gitignore:

[pull request 2850](#) rejected [pull request 2850](#) [Unity] Adding VS Code and flexibility author [pctroll](#) label [feedback given](#)
comments [1](#) created [october 2018](#) updated [may 2019](#)
[pull request 3068](#) rejected [pull request 3068](#) Include Library/*.asset files for Unity3D author [der-hugo](#) label [discussion wanted](#)
comments [11](#) created [may 2019](#) updated [august 2021](#)

Social

Medium articles:

[Optimize Your Angular Application Deployment with Multi-Stage Dockerfiles in an Nx Workspace](#)

Answering math questions on [Quora](#):

[What does "as a function on time" mean?](#)

[What is f\(x\)?](#)

[What does f\(x\) = x mean?](#)

Answering and asking questions on [StackExchange](#).

My profiles on:

[Stack Overflow](#)

[Game Developemnt](#)

[Mathematics](#)

[Super User](#)

[Mathematica](#)

Web

[Angular](#), [Ionic](#), [StencilJS](#), [Three.js](#), [HTML5](#), [CSS3](#), [JavaScript](#), [TypeScript](#), [JSON](#), [npm](#), [ts-node](#), [semantic-release](#), [SQL](#), [MongoDB](#), [docker images](#); secure building of docker images with private npm packages.

Scripting

git bash/zsh aliases and functions ([full list I use everyday](#)), bash script to execute a command on all the files in the folder/put the new files into their own folder, scripting with TypeScript and JSON using [Node.js file system](#)

Gaming

C#, [Unity3D](#), [UE4](#), [Python 3](#), [Ren'Py](#), Xbox One, PSVita, [Box2D](#), Graphics programming ([SFML](#), [DirectX 11](#)), Networking with [SFML](#)

Data

Data visualization with [ggplot 2](#) and R ([Project](#)), [pandas](#) and [NumPy](#) ([Project](#)), [Gephi](#), [SQL](#), [Statistics](#), [LaTeX](#)

Testing

[Unit testing in Angular with Jasmine and Karma](#), e2e/BDD testing in Angular with [Playwright](#) and [Docker](#), [Jest](#), [Mocha](#), [Travis CI](#), running Jasmine/Karma and Playwright tests on CI ([Travis/GitHub Actions](#))

Tools

VS Code, MS Visual Studio, UNIX terminal, XCode

Teamwork

[Notion](#), [Jira](#), [Confluence](#), [Slack](#), [MS Teams](#), [Pair programming with Live Share using VS Code](#)

Education

University of Stirling, Stirling, United Kingdom

2019–2020

GradCert in Mathematics and Data Science

Representing and Manipulating Data (Merit):

[Around the World in 80 Days by Jules Verne](#), [book analysis with Python](#)

Commercial and Scientific Applications (Merit)

Statistics for Data Science (Pass):

[Statistical Data Analysis of Student Goals](#)

Networks & Graph Theory (Pass):

[Barack Obama's Retweet Network](#)

University of Abertay Dundee, Dundee, United Kingdom

2015–2018

BSc with Merit in Computer Game Applications Development, 2:1

3rd year modules (GPA: 2.83):

[Graphics Programming with Shaders](#) (C+)

[Gameplay Mechanics Development](#) (C+)

[Network Systems for Game Development](#) (A)

[Artificial Intelligence](#) (B)

Professional Team Project: Planning and Prototyping (C+)

Professional Team Project: Development and Delivery (C+)

2nd year modules (GPA: 4.17):

[Data Structures and Algorithms 1](#) (A)

[Data Structures and Algorithms 2](#) (A+)

[Graphics Programming](#) (A)


[Game Programming and System Architectures](#) (A)

[Film and Game Genres](#) (A)

[Mathematics for Application Development 2](#) (A+)

1st year modules (GPA: 3.63):

[Computer and Graphics Architectures](#) (A) 

[Programming in C++](#) (A) 

[Narrative Theory in Interactive Game Design](#) (C+)

[Mathematics for Applications Development 1](#) (A+)

[Games for Change](#) (B+)

[Asset Production for Games](#) (B+):

Funding Awarded

The Data Lab scholarship, Stirling, United Kingdom

2019–2020

Fully funded place in Mathematics and Data Science

£6500 towards tuition fees

Professional training with Data Scientists

Data Lab events

Relevant Experience



Software Engineer, asensei, Edinburgh, United Kingdom | [San Francisco](#) May 2020–Present CA | Remote in [Dundee](#), United Kingdom

Overview:

App development for Android and iOS using Angular/Ionic with Capacitor and Capacitor plugins, ia. Text-To-Speech Capacitor plugin

Tools development in Angular with Ionic, Bootstrap and custom web components built with Stencil
Test Driven Development (TDD):

- Unit testing with Jasmine and Karma
- e2e/BDD testing with Playwright and Docker
- Automated CI/CD with [semantic-release](#) for:
 - software releases
 - npm packages
 - Stencil web components

Details:

CI/CD with [GitHub actions](#), [Travis CI](#); stages: [Jest/Mocha](#), [Codecov](#), [dependabot](#), [semantic-release](#) to [npm](#)
Building applications in [Angular/Ionic](#)
Graphics programming with [Three.js](#) in [Angular/Ionic](#) and [StencilJS](#)
Building web components in [StencilJS](#) with [Three.js](#) and quaternion math
Development of internal tools with Angular, TypeScript, JSON and [Node.js file system](#)
Package distribution via [npm](#) with [semantic-release](#) using [Travis CI](#)
Building internal VS Code extensions to provide snippets and highlighting for the internal tools
bash/zsh functions/aliases to improve workflow (processing of multiple files, encapsulation and input simplification of commonly used commands)
Technical/implementation documentation writing in [Notion](#) and [Confluence](#)
[Pair programming with Live Share in VS Code](#)
Onboarding and mentoring of new team members

Internship, C++ Software Engineer, [AA](#) [viastore](#), [AA](#) [Prague, Czechia](#)

Jan-Mar 2019

Learned about:

- Relational and non-Relational Databases using SQL and C++
- Large distributed IT systems
- Business use of rapid prototyping

Internship, Unreal Game Programmer, [AA](#) [Bohemia Interactive](#), [AA](#) [Prague, Czechia](#)

Aug-Oct 2018

Project worked on: [Vigor](#), post-apocalyptic survival game

Responsibilities:

- Networked gameplay programming
- UI programming
- Prototyping
- Bug fixing
- Developing new solutions based on already existing ones

Lead Programmer, [AA](#) [Abertay University: Professional Project](#), [AA](#) [Dundee](#) Sep 2017-Jun 2018
[United Kingdom](#)

Projects worked on:

Mobile game for [Junkfish](#) Game Company

Retro platformer for [Timex](#)

- Engine: Unity
- Programming language: C#
- Platforms: Android (Junk Fish), Windows (Timex)
- [GitHub](#)

Responsibilities:

- Gameplay programming
- Prototyping
- Source control maintenance: merging, pull requests, .gitignore

Team management:

- Kanban boards with GitHub Projects
- SCRUM (Deadlines setting, task assignment, mentoring)

Game Jams [AA](#) [AA](#)

Gameplay Programmer/Design/Team Lead, Serious Game Jam, [AA](#) [Dundee](#),
[United Kingdom](#)

Jan 24-26,
2018

Mobile game prototype:

Aid for lectures and students from the University of St Andrews,
with preparation and explanation of their practical exercises

Engine: Unity
Programming language: C#
Platform: Android
[GitHub](#)

Gameplay Programmer/Design/Team Lead, AGDS 4-hour Game Jam, [A](#) [A](#)

Nov 8, 2017

[A](#) [A](#) [Dundee, United Kingdom](#)

Brief visual novel with animations, telling a joke

Made in 4-hours with two artists

Engine: Ren'Py

Programming language: Python

Platform: Windows

[GitHub](#)

Gameplay Programmer/Design/Team Lead, Rainbow Game Jam, [A](#) [A](#) [Dundee, United Kingdom](#)

Aug 15-17,
2016

Infinite runner chosen to be made in 48-hours with two other artists and a sound designer

Engine: Unity

Programming language: C#

Platforms: Windows, MAC, Linux

[GitHub](#)

Gameplay Programmer, Global Game Jam 2016, [A](#) [A](#) [Dundee, United Kingdom](#)

Jan 29-31,
2016

Easy pick-up game. My first Unity project and first game jam

Engine: Unity

Programming language: C#

Platforms: Windows, MAC, Linux

Societies [A](#) [A](#)

Member of Abertay Game Development Society, [A](#) [A](#) [Dundee, United Kingdom](#) Sep 2015-Jul 2018

[2nd year project](#)

[1st year project](#)

Volunteer Experience

Built and managed St Andrew's RC Cathedral website, [A](#) [A](#) [Dundee, United Kingdom](#) Sep 2017-Aug 2018

<http://www.standrewscathedraldundee.com/>

1st Year Class Representative at Abertay University, [A](#) [A](#) [Dundee, United Kingdom](#) Sep 2015-Apr 2016

Listening to student feedback and liaising with lectures

Attended training about leadership and teamwork

Other Experience [A](#) [A](#)

Warden, † St. Ninian's Institute, Diocese of Dunkeld, [A](#) [A](#) [Dundee, United Kingdom](#) Oct-Dec 2015

Taking care of the St Ninian's Institute and its guests

Welcoming at the reception and showing guests to their rooms





Waiter/Bartender, Drumoig Golf Hotel,   Drumoig, United Kingdom

Apr-Aug 2015

Welcoming people at the reception

Bartending

Waitering

Office Assistant,   University of Wroclaw,   Wroclaw, Poland

May-Aug 2013

Calling vendors to set up appointments and gather information

Post delivery

Clerk duties

Junior Lifeguard,   Wroclaw Water Park,   Wroclaw, Poland

Jan-Aug 2009

Taking care of visitors safety and well being

Stamina and wellbeing training