ORI LAZAR

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A passionate programmer who feels enjoyment and fulfillment from the journey of creating experiences.

EDUCATION

Newcastle University, United Kingdom — *September 2019 - July 2020*
Masters of Computer Games Engineering. — Overall: First Class - 92%

University of Southampton, United Kingdom — *August 2016 - September 2019*
Bachelors of Computer Science. — Overall: First Class

Zman Amiti Bartending School, Israel — *January 2016 - April 2016*
International Mixologist Qualification. — Overall: 96%

Bedales School, United Kingdom — *August 2012 - June 2014*
A-Levels: Maths, Further Maths, Physics, Computer Science.

WORK EXPERIENCE

Coconut Lizard, England — **April 2020 - Current**
UE4 Engine Developer

· **Engine Work:** During my time at CL I have been working on two AAA games, Sea of Thieves and Everwild, in collaboration with Xbox Games Studios and Rare, producing: next-gen console optimizations, a minimal footprint run-time network traffic context profiler, server-side optimizations, client-side optimizations, a Pak file patching optimization framework, an asset and code budget monitor framework, bug fixes, Kusto data analysis with lens dashboard integration, team-city test improvements, bug triaging, workflow support for non core teams, tool-chain improvements (c#) and streaming system improvements.

· **Internal Tools:** During my time at Coconut Lizard I had found that we were spending a lot of developer time performing tasks which could be automated by utilizing the extensibility of visual studio. As a result I took initiative and over a couple of weekends I put together a visual studio extension which automated these procedures. After releasing this extension company wide I was allocated time during work hours to continue its development further as a result of the effectiveness of this tool. An example of an improvement; A 10 minute manual job which had to be done per file, turned into a negligibly timed (0.0001s) procedure triggered by a key-bind press.

DLC LTD, Israel — **2017 - 2018**
Computer Vision Developer

· **2018:** Worked on the integration and implementation of deep neural nets to produce classification of a dynamic set of entities in dynamic environments, including windy environments which had to be tracked during dynamic times of the day. Involved **Tensorflow, Qt, python and C++**.

2017: Developed algorithms which performed real-time motion detection in both new and existing security system and tasked with implementing these solutions into client's Qt based applications.

Cote D'azur Cocktail Bar, Cyprus — **2016**
Bartender

NOTABLE PROJECTS

An extensive description of all my projects can be found on my website, which is continuously being updated with my new works (orilazar.com).

Masters Dissertation
An analysis of resource streaming systems in commercial game engines. This research resulted in the production of a formal specification of features needed to create a resource streaming system based on existing commercial implementations & cutting edge research methodologies for managing resources.

Undergraduate Dissertation
Paper investigating false alarm removal in real-time CPU based motion detection and neural-net classification algorithms. Solution written in **C++** with **Qt** and the **Caffe** deep-learning framework.

Exalted Graphics Engine
Graphics engine built from the ground up with API-agnostic rendering, written in **C++**.

Vulkan Pipeline Assistant
Tool which aims to be a solution for the problem of having to write hard-coded data for the generation of different graphics pipelines when using the Vulkan API. Written in **C++** with **Qt** and **Vulkan**.

Game Technologies Goose Game
AI, Physics and Networking solutions to produce a playable game with all those components, written in **C++**.

Elysium Puzzle Simulator
Combinatorial strategy simulator for variations of the 15-Puzzle problem, written in **C++**.

Runway Re-declaration Tool
Developed as a team project using **agile methodologies**. This tool analyzes airport runway landing scenarios with respect to a set of safety requirements. My roles were **scrum leader** and **lead programmer**. Written in **Java Swing**.

Mapex Programming Language
A programming language developed in Haskell, developed with the goal of being able to solve any conjunctive query. Written in **Haskell**.

Industrial 6-DOF Robotic Arm Simulator
Built from scratch, a simulation of a 6-DOF industrial robotic arm, including kinematic and inverse kinematic solvers. Written in **Matlab**.

TECHNICAL SKILLS

Programming Languages:	C++, `C#`, GLSL, Java, C, Lua, Python, Haskell, HTML, CSS, Javascript, Matlab, KustoQL, Bash, Shell
Tools:	Visual Studio, ADO, Jira, Lens Dashboards, Git, Premake, NSight, Eclipse, IntelliJ, Photoshop, Latex, Qt Creator, CMake
Frameworks and Engines:	Unreal-Engine 4 & 5, Qt, Unity, Team-City, Java-Swing Tensorflow
Libraries:	OpenCV, OpenIMAJ, OpenGL, GLM, ImGui, Assimp, Vulkan, ENet, Keras

PERSONAL NOTES

When possible I enjoy travelling to unique destinations, documenting my experiences through **amateur photography**. I spend my evenings with my dogs and partner, usually visiting local nature zones.

Can fluently communicate in **Hebrew** and **English**.

I also **read books**, **blog posts** or **research papers** daily, usually relating to Quantum Computing, Computer Vision, Artificial Intelligence and Robotic Systems, however I do diverge into psychology papers quite often as I find great interest in the ways in which humans interact and behave.

REFERENCES

References available upon request. Please contact me via e-mail or phone.