



Alexandre Serex

23-year-old software engineer



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LANGUAGES

C++



UE4 Blueprints



Python



WebGL / GLSL



C#



Web Development



FRAMEWORKS - ENGINES

Unreal Engine 4 (UE4)

Unity

Qt

CUDA

Meteor - React



SPOKEN LANGUAGES

French

Mother tongue

English

Level C1 – advanced

Skills

Graphics programming

Parallax mapping in WebGL, node based shader experience in Unreal Engine 4, CUDA parallel programming model

Gameplay programming

Implementation of gameplay features in C++, C# and with UE4 Blueprints, such as player controls, procedural level generation or a simple AI system

General programming

Ease with both Object Oriented Programming and Functional Programming, strong architecture and abstraction skills, familiarity with agile methods

Math

Strong linear algebra and analysis skills, ability to translate complex mathematical models into efficient algorithms

Social

Experience working in multi-disciplinary teams in both lead and non-lead positions

Most relevant projects

2017 - today

Island generation in Unreal Engine 4, with Python prototyping. The terrain is based on domain-warped Simplex noise along with Julia set fractals

2018

Head organizer of the LearnIT Event, an event to teach video game development to 12-18 year olds

2018

Level generation for a 2D top down shooter in a team of fourteen developers in Unity

2017

Game-Level Designer and Gameplay-Camera Programmer for a juicy arcade racing / rhythm game

2016

Water shader in *vanilla* WebGL based on the Gerstner waves model, implementing custom Parallax Mapping



HOBBIES



My first game

Final Fantasy X

Currently playing

Divinity: Original Sin

Spent a lot of time

TESV: Skyrim

The Witcher 3

Fun with friends

Borderlands

Factorio

Replayed massively

Dishonored

Mass Effect

Cried in front of

The Last of Us

Life is Strange

Ori & the Blind Forest

Super Meat Boy

Loved

All of them, and many more



Last traveled to

Bruxelles by car

Budapest, Prague and

west Poland by train

Travelling with

Girlfriend mostly,
sometimes family

Music

Played guitar for fifteen
years, mostly classical

Improvisation

Improv. theatre got me
quite extrovert, plus the
ability to speak in front
of a large public



Motorcycle

Have been driving a
Kawasaki Ninja 250cc
for almost five years

Professional experience

2017 - today

EPFL: General software engineer. Developed a particle simulation model in Python with Numba, a runtime polymorphic instruments controller on a raspberry pi and a Meteor web application for data visualization and storage in the Ecological Engineering Laboratory

2017

GarageCube: Mandated to create a plugin oriented micro-framework and UI capable of handling Face Tracking and communication by OSC with Qt

2016

GarageCube: Internship to create a web based IDE working with an API to edit scripts for their main software, MadMapper

Education

2014 - 2017

Bachelor degree in Software Engineering at *Haute École ARC* in Neuchâtel, Switzerland

2013 - 2014

Transition year from academic to engineering career

2012 - 2013

Junior year in physics at *École Polytechnique Fédérale de Lausanne* (EPFL)

Words about me

Team oriented

Most of my projects were conducted in teams of three to fourteen people, in which I had both lead and executive implications.

Motivated and independent

For the LearnIT Event, I started alone, formed and lead a committee of seven people and gathered tens of thousands of swiss francs because I wanted to give teenagers the opportunity to discover video game development.

Learning above comfort

Learning is about risk and commitment, and even though criticism and failure is difficult to handle, it's at the heart of my motives.

Curious

One should never assume he knows enough.