Simone Guggiari

Software Engineer, Gameplay Programmer, Master Computer Science ETHZ

Software Engineer with **5 years** of **C++** and **C#** software development experience. Strong **3D math** skills.
Extensive experience in **game development**, including gameplay, game engine, AI, graphics and physics programming.
Team player able to contribute to many areas of game development.
Developed games showcased at several exhibitions, including Gamescom 2018.

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EDUCATION

Master in Computer Science
ETH (Eidgenössische Technische Hochschule)
09/2017 – 09/2019   *Zürich, Switzerland*
Focus and Grades
- Computer Graphics (5.5/6.0)
- Computer Vision   (5.5/6.0)
- **GPA: 5.55/6.0** (top 10%)
- Game Programming (2nd pl.)
- Probabilistic AI   (6.0/6.0)

Bachelor in Computer Science
ETH (Eidgenössische Technische Hochschule)
09/2014 – 08/2017   *Zürich, Switzerland*
Selected Courses and Grades
- Algorithms   (5.25/6.0)
- Linear Algebra (5.0 /6.0)
- **GPA: 5.37/6.0** (top 20%)
- Visual Computing   (6.0/6.0)
- Computer Architecture (5.5/6.0)

HONORS AND AWARDS

Mathematical Kangaroo - **1st** Place, Cantonal (2011 – 2013)
International Math Competition - Commission of Italian Switzerland (CMSI)

Robot Programming Competition - **1st** Place (2012)
Cybercamp Fribourg - FriBot

Game Programming Laboratory - **2nd** Place (2018)
ETH Zürich - That Failed Bank Robbery

Physically Based Simulations - **3rd** Place (2016)
ETH Zürich - Ragdoll Simulation

Selected as member of Swiss Delegation to Gamescom (2018)
ProHelvetia - That Failed Bank Robbery

Selected as member of Ludicious Business Accelerator (2019)
Ludicious - That Failed Bank Robbery

WORK EXPERIENCE

Game Technology Center
Master Thesis ⧉
10/2018 – 04/2019   *Zürich, Switzerland*
Emergent Personalized Content in Video Games
Thesis (grade 6.0/6.0, suggested for publication)
- Developed behavior-based adaptive procedural level generation
- Designed and developed web-based video game

Supervisors: Prof. Dr. Robert W. Sumner – Dr. Fabio Zünd

Disney Research Zürich
Bachelor Thesis ⧉
02/2017 – 08/2017   *Zürich, Switzerland*
Making Simulated Characters Accessible in Unity
Thesis (grade 5.5/6.0)
- Integrated physics simulation in C++ into Unity game engine
- Developed VR and AR tech demos for simulated characters

Supervisors: Prof. Dr. Robert W. Sumner – Dr. Martin Guay

SKILLS

Languages (strong experience)
C++, C#

Languages (basic experience)
C, Java, Python, HLSL, PHP, SQL, JavaScript, Assembly, Eiffel, HTML

Game Frameworks/Engines
Unity 3D, MonoGame, XNA, SFML, Pico-8

Gameplay Systems
Character controller, camera, inventory, weapons, AI, animation

3D Math
Linear algebra, graphics and physics related algorithms

Libraries and API
Direct3D, OpenGL, STL, Eigen, Open Dynamics Engine, Vuforia

Methodologies, Software Architecture
Scrum, Agile, Design Patterns, UML, Collaborative tools

Tools
Git, Visual Studio, Blender, Photoshop, Audacity, Office, Latex, Matlab

Other
VR, AR, PC and Console programming experience, Computer Architecture understanding

LANGUAGES

Italian
Native (C2)

German
Fluent (C1)

English
Proficient (C2)

French
Intermediate (B2)

NOTABLE GAME PROJECTS

That Failed Bank Robbery (2018) ⧉
- Xbox One Game (www.thatfailedbankrobbery.ch)
- **2nd** place overall (ETH Game Programming Lab)
- Selected for **Gamescom 2018**, Swiss Delegation (ProHelvetia, Swiss Arts Council)
- Selected for Business Accelerator (Ludicious Game Show)

Rainforest, Inc. (2018) ⧉
- Ludum Dare 42 Jam entry (www.simone-guggiari.com/rainforest)
- **4th** most played game out of 3069, placed top 100
- Selected to be showcased at Zürich Game Show

OTHER

Swiss Game Developers Association
Member