

# FEDERICO SALDARINI

Computer Scientist | Software Engineer



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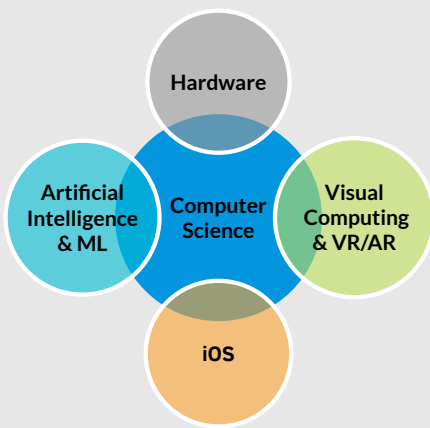
/in/federicosaldarini



saldavonschwartz

## Skills

### Areas



### Languages

Python • C++ • Obj-C • C# • Swift

## Projects

### Jumpy Cube

A physics-based endless scroller game which doubles as a reinforcement learning environment.

### NNKit

A Python framework for implementing dynamic neural networks.

### DQN

An implementation of Deep Q-Network used in solving reinforcement learning environments in OpenAI Gym.

### Digits

A neural network classifier trained in Python and deployed to iOS via Obj-C++ and OpenCV.

### GPUKit

AC++ framework for OpenGL rendering.

### VRTeleport

AC++ plugin for virtual reality teleportation in Unreal Engine.

## ABOUT

I am a computer scientist focused on **visual computing**, **artificial intelligence** and interfacing with the physical world and enjoy projects where these converge.

## EDUCATION

2018	<b>Audited Courses</b> <ul style="list-style-type: none"><li>• CS188 Artificial Intelligence</li><li>• CS184 Computer Graphics</li></ul>	University of California, Berkeley. Berkeley, CA. <ul style="list-style-type: none"><li>• CS189 Machine Learning</li><li>• CS194 Computational Photography</li></ul>
2011	<b>B.S. Computer Science</b>	Portland State University. Portland, OR.
2009	<b>Music Synthesis</b>	Berklee College of Music. Boston, MA.

## EXPERIENCE: VR, AR, AI, GRAPHICS AND HARDWARE

01/19	<b>Graphics Engineer (Contract)</b> ■ OpenGL, SDL2, C Porting of the video game X-Ball (2001) from SDL1 to SDL2 + OpenGL, for OSX and Windows.	Crystal Pier Software
03/17	<b>Graphics Engineer (Contract)</b> ■ ■ OpenGL, C++ R&D of OpenGL ES voxel engine for Raspberry Pi, as an alternative to Minecraft Pi Edition.	Piper
02/17	<b>Co-Creator / VR Software Engineer</b> ■ Unreal Engine, Unity, HTC Vive Winner of the Immersion Award at the 45th Festival Du Nouveau Cinéma, Canada. R&D of a room-scale VR experience featuring depth-capturing of live actors and environments.	RED Patterns
11/16	<b>VR Engineer (Contract)</b> ■ Unity, Oculus Rift, Google Cardboard Character rigging and optimization of assets and precomputed lighting according to capabilities of desktop vs mobile VR hardware.	Endless Riff
05/16	<b>VR Engineer (Contract)</b> ■ Unreal Engine, Unity, Samsung GearVR, Google Cardboard Prototyping of different VR + 360 film viewers and interactive environments for different mobile platforms.	Boon VR
02/16	<b>iOS + Bluetooth Engineer (Contract)</b> ■ ■ iOS, Bluetooth LE Implementing a BLE protocol and music engine for iOS devices to interact with a custom electronic guitar.	Magic Instruments
08/15	<b>AR Engineer (Contract)</b> ■ ■ iOS, C++, Vuforia Auditing and bug-fixing of C++ / Vuforia code in an iOS AR application.	Wiggle Planet
02/14	<b>iOS / Unity Engineer (Full-Time)</b> ■ ■ ■ ■ iOS, C++, Unity, Bluetooth LE Implementing several features of Anki Drive for iOS. R&D on interfacing Unity with custom C++ AI-planner.	Anki

## OTHER IOS EXPERIENCE: FULL-TIME & CONTRACT | 2012-2017

Shyp • Shopular • Live Nation • Interview Cake • Basic Space • Learnist • Nextive

## PUBLICATIONS

11/10	<b>The Audio Programming Book</b> Waveshaping: from Csound to Cocoa. DVD: Ch. 34.	MIT Press
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