

FEDERICO SALDARINI

Computer Scientist | Software Engineer



Oxfede.io



fede.saldarini@gmail.com



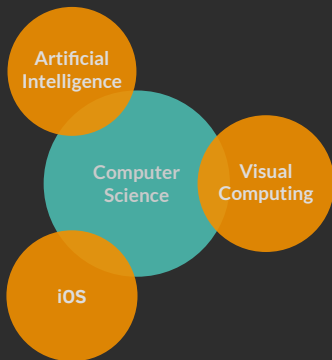
/in/federicosaldarini



saldavonschwartz

Skills

Areas



Languages

Python • C • C++ • Obj-C • C#

Favorite Frameworks

PyTorch • NumPy • Eigen • glm
LaTeX • Jupyter • SciPy • matplotlib
OpenGL • OpenCV • Unity • Unreal

Projects

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

C++ framework for OpenGL rendering.

VRTeleport

A C++ plugin for VR teleportation in Unreal Engine.

rev: 2019-07-31

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

2011 **B.S. Computer Science** Portland State University. Portland, OR.

2009 **Music Synthesis** Berklee College of Music. Boston, MA.

Relevant Coursework (for credit and audited)

- Artificial Intelligence
- Computer Graphics
- Parallel Computing
- Machine Learning
- Computational Photography
- ConvNets for Visual Recognition

EXPERIENCE

01/19 **Graphics / Game Engineer (Contract)** Crystal Pier Software
SDL2, C
Porting an OSX / Windows game from SDL1 to SDL2 and optimizing the game's underlying sprite-based graphics library.

03/17 **Graphics Engineer (Contract)** Piper
OpenGL, C++
Researched optimization methods for OpenGL ES voxel engine on Raspberry Pi platform.

02/17 **VR Engineer / Co-Creator** RED Patterns (Immersion Award, 45th FNC)
Unreal Engine, Unity, HTC Vive
Implemented a room-scale VR experience including depth-captured environments and actors.

11/16 **VR Engineer (Contract)** Endless Riff
Unity, Oculus Rift, Google Cardboard
Rigged character models and optimized precomputed lighting in virtual reality scenes.

05/16 **VR Engineer (Contract)** Boon VR
Unreal Engine, Unity, Samsung GearVR, Google Cardboard
Prototyped VR environments integrating interactive features and 360 video in Unity and Unreal Engine.

02/16 **iOS / Bluetooth Engineer (Contract)** Magic Instruments
iOS, Bluetooth LE
Implemented a Bluetooth protocol and music engine for iOS devices to interact with an electronic guitar.

08/15 **AR Engineer (Contract)** Wiggle Planet
iOS, C++, Vuforia
Worked on viewport / transform-related code in a custom engine interfacing with Vuforia SDK.

02/14 **iOS / Unity Engineer (Full-Time)** Anki
iOS, C++, Unity, Bluetooth LE
Worked on Drive game for iOS and R&D on interfacing Unity with C++ AI-planner and Bluetooth LE stack.

OTHER EXPERIENCE: iOS FULL-TIME & CONTRACT | 2012-2017

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

PUBLICATIONS

F. G. Saldarini, "Waveshaping: from csound to cocoa," in *The Audio Programming Book*, 1st ed., R. Boulanger and V. Lazzarini, Ed. Cambridge: The MIT Press, 2010, DVD Ch. 34.