FEDERICO SALDARINI

Computer Scientist | Software Engineer

- 0xfede.io
- fede.saldarini@gmail.com
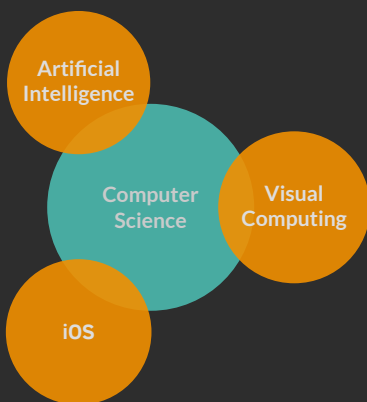- /in/federicosaldarini
- saldavonschwartz

Focus ——————

Artificial Intelligence

Computer Science

Visual Computing

iOS

Languages ——————

Python • C • C++ • Obj-C • C#

Frameworks ——

- PyTorch
- Numpy
- SciPy
- Eigen
- glm
- xtensor
- OpenGL
- OpenCV
- matplotlib
- LaTeX
- Jupyter
- Unity
- Unreal

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.

Relevant Coursework (for credit and audited)
- Artificial Intelligence
- Machine Learning
- Computer Graphics
- Computational Photography
- Parallel Computing
- ConvNets for Visual Recognition

PUBLICATIONS

2010   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.

PROJECTS IN AI / VISUAL COMPUTING

Automatic Panorama Stitcher
A pipeline for warping images via planar reprojection based on feature matching.

NNKit
A Python framework for implementing dynamic neural networks.

Deep Q-Network
Implementation of DeepMind's reinforcement learning algorithm and testing in OpenAI Gym.

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

GPUKit
A C++ framework for OpenGL rendering.

VRTeleport
A C++ plugin for VR locomotion in Unreal Engine.

EXPERIENCE

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

■ 05/16 - VR Engineer
Boon VR
Prototyped VR environments integrating interactive features and 360 video in Unity and Unreal Engine.

■ 03/17 - Graphics Engineer
Piper
Researched optimization methods for OpenGL ES voxel engine on Raspberry Pi platform.

■ 02/16 - iOS / Bluetooth Engineer
Magic Instruments
Implemented a Bluetooth protocol and music engine for iOS devices to interact with an electronic guitar.

■ 02/17 - VR Engineer / Co-Creator
RED Patterns • [Immersion Award, 45th FNC]
Implemented a room-scale VR experience including depth-captured environments and actors. Comissioned by SAT, Canada.

■ 08/15 - AR Engineer
Wiggle Planet
Worked on viewport / transform-related code in a custom engine interfacing with Vuforia SDK.

■ 11/16 - VR Engineer
Endless Riff
Rigged character models and optimized precomputed lighting in virtual reality scenes.

■ 02/14 - iOS / Unity Engineer
Anki
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