

FEDERICO SALDARINI

Computer Scientist | Software Engineer



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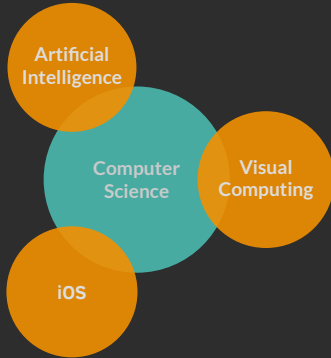
/in/federicosaldarini



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

Automatic Panorama Stitcher

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

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: 2019-08-06

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 Riff, 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.