OSCAR DADFAR

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www.cardadfar.com

Education.

Carnegie Mellon University

Masters of Science in Computer Science
3.93 GPA   May 2022

Bachelor's of Computer Science & Art
3.93 GPA   Dec. 2020

Minor in Computer Graphics

Minor in Machine Learning

Minor in Computational Physics

Skills.

After Effects	Python
Flash Prof.	JavaScript
Premiere Pro	C / C++
Illustrator	Obj-C
Photoshop	Swift
InDesign	HTML / CSS

Real-Time Rendering

Graphics Architecture

Deep Learning

Web App Development

Video Editing

2D/3D Animation

Coursework.

Computer Graphics & Vision

Visual Computing Systems

Deep/Reinforcement Learning

Graduate Artificial Intelligence

Graduate Appearance Modeling

Parallel Computer Architecture

Discrete Differential Geometry

Advanced Computational Physics

Animation Independent Study

Art and Machine Learning

Mission. Integrating Animation, AI, & Architecture (3 A's) into intelligent, high-performance digital tools to help non-artists create art.

Experience. more at **cardadfar.com/experience**

Digital Video & Audio Intern
Adobe | ◢ | Summer 2021

Working with Adobe research scientists & ML engineers to develop and integrate new real-time AI-based optical-flow video interpolations into Premiere Pro.

Core Animation Intern
Apple | 🍎 | Spring 2021

Provided additional performance features for the graphics compositing engine behind every Apple device with a display by developing benchmark statistics to help monitor render pipelines.

Video Application Intern
Apple | 🍎 | Summer 2020

Researched and developed real-time shader-based AR filters for iOS with intelligent scene understanding optimized for performance and battery-usage.

Leadership. more at **cardadfar.com/experience**

Teaching Assistant
Computer Graphics | 15-462 | Fall 2019, Fall 2020, Spring 2021

Maintaining graphics app code database & teaching students how to implement vector rasterization, mesh editing, raytracing & kinematics.

Parallel Computer Architecture | 15-418 | Fall 2020, Spring 2021

Managing assignments and course projects related to multithread locking, work partitioning, synchronization, and message passing.

PhD-Level Machine Learning | 10-701 | Spring 2020

Helping students learn regression and deep learning models while also serving as a mentor for semester-long research.

Course Instructor
Animation & Video Editing | Fall Semesters | < tinyurl.com/stuco-ave />

Teaching students video editing, motion graphics, kinetic typography, hand-drawn, & vector-based animation.

Building Personal Websites | Spring Semesters | < tinyurl.com/stuco-bpw />

Created course to teach students fundamentals of HTML, CSS & jQuery while assisting students with building their own sites.

Projects. more at **cardadfar.com/projects**

3A2A: 3D-Assisted 2D Animation   ICIG 2021
< http://cardadfar.com/assets/projects/3A2A.pdf />

Converting 2D stick-figure drawings to posable 3D characters that are toon-shaded and sketched to create 2D animations from stick-figures.

Autonomous Environmental Texturing   CCGIV 2021
< cardadfar.com/projects#gan-theft-auto />   Best Presentation

Texturing a procedurally-generated semantic-segmented city in Unity using Pix2Pix trained on the CityScape and GTA V dataset.

Japanese Water Shader
< cardadfar.com/projects#water-shader />

Developed a toon-based water shader in GLSL that uses laplacians and current/previous-frame heightmap data to determine fragment shading.

OpenPose Motion Capture Parser
< cardadfar.com/projects#idance />

Built a polygon rendering environment that converts 2D motion capture JSON data into an After Effects readable format.