

OSCAR DADFAR



www.cardadfar.com

Education.

Carnegie Mellon University



Masters of Science in
Computer Science
---- 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 benchmarking 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.

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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 />](http://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 />](http://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

[< http://cardadfar.com/assets/projects/3A2A.pdf />](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

[< cardadfar.com/projects#gan-theft-auto />](http://cardadfar.com/projects#gan-theft-auto)

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 />](http://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 />](http://cardadfar.com/projects#idance)

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