

OSCAR DADFAR



[email omitted]

[phone omitted]

www.cardadfar.com

Education.

Carnegie Mellon University



**Masters of Science in
Computer Science**
4.00 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

Flash Prof.

Premiere Pro

Illustrator

Photoshop

Fresco

Python

JavaScript

C / C++

Obj-C

Swift

HTML / CSS

Real-Time Rendering

Graphics Architecture

Generative Deep Learning

Web App Development

2D/3D Animation

Video Editing

Coursework.

Computer Graphics & Vision

Parallel Computer Architecture

Deep & Reinforcement Learning

Advanced Computational Physics

2D Computer Animation

Art & Machine Learning



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

Experience.

more at cardadfar.com/experience



Research Engineer

Adobe Research | | Aug 2022 - Current

Advanced Mask Tracking in After Effects (v26.3) [2026]

- + 5x speedup of sparse-point vector mask tracker with iterative resampling.
- + Real-time tracking support.

Smart Masking in Premiere Pro (v26.0) [2025]

- + Support for new perspective-based transform & improved affine transforms.
- + Faster mask rendering with new user transforms to help animate masks

Project Primrose [2023]

- + Helped build a dress with a display that walked NYC Fashion Week.
- + Wrote an After Effects render pipeline for designing animations on the dress.

Professor of Computer Science

Carnegie Mellon University | | Spring 2022 - Current

See 'Teachings' for more information.

Core Animation Intern

Apple | | Spring 2021

Worked on the graphics compositing engine behind every Apple device with a display. Added new performant rendering techniques.

Video Application Intern

Apple | | Summer 2020

Researched real-time AR shaders for iOS with intelligent scene understanding. Optimized for performance and battery-usage.

Teachings.

more at cardadfar.com/index



Adjunct Instructor | | Carnegie Mellon University

Computer Graphics | 15-362/662 | [F23] [F24] [F25] [F26]

Graphics course focusing on graphics pipeline, geometric modeling, rasterization, ray tracing, light transport, material modeling, spatial data structures, physical simulation, and computer animation.

Neural Graphics | 15-474/674 | [F26]

Advanced graphics course focusing on neural texture compression, neural shading, neural denoising, gaussian splatting, NeRFs, inverse rendering, neural frame interpolation, and stylized animations.

Visual Computing Systems | 15-473/673 | [S22] [F23] [F24] [F25]

Advanced graphics course focusing on the graphics pipeline, high-performance rasterization, texturing fetching, shading language design, parallelization, scheduling, image processing pipeline & compression

Projects

more at cardadfar.com/projects



3A2A: 3D-Assisted 2D Animation

< <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 />

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

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.