

# OSCAR DADFAR



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## 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](https://cardadfar.com/experience)



### Research Engineer

Adobe Research | | Aug 2022 - Current

Smart Masking in Premiere Pro (v.25.4) [2025]

- + 5x speedup of sparse-point vector mask tracker with iterative resampling.
- + Support for new perspective-based transform & improved affine transforms.
- + Additional new affine user transforms to help users animate masks.

Primrose (Adobe's wearable dress tech) [2023]

- + Built After Effects render pipeline for NYC Fashion Week dress animations.
- + Created dress animations showed at Adobe MAX 2023 USA & Japan.
- + Most-viewed Adobe MAX sneak.

### 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](https://cardadfar.com/index)



### Adjunct Instructor | | Carnegie Mellon University

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

Teaching the graphics pipeline, vector rasterization, mesh editing, raytracing & kinematics.

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

Advanced graphics course at the intersection of computer architecture & computer graphics/vision focusing on hardware-accelerated graphics.

Animation & Video Editing | 98-331 | [ F18 ] [ F19 ] [ F20 ] [ F21 ]

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

Building Personal Websites | 98-177 | [ S19 ] [ S20 ] [ S21 ] [ S22 ]

Teaching fundamentals of HTML, CSS & jQuery while assisting students with building their own sites.

## Projects

more at [cardadfar.com/projects](https://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  
Best Presentation

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

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