OSCAR DADFAR

www.cardadfar.com

Education

Carnegie Mellon University

3.9 GPA — May 2022

- Masters of Science in Computer Science
- Bachelor's of Computer Science & Art
- 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 digital art with computer science & computational physics to design computational tools that help non-artists without artistic abilities create art.

Experience

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

Video Apps Engineering Intern

Apple | | Summer 2020

Working on the Final Cut Pro Motion Team to produce new visual effects using real-time rendering. Focusing on temporal performance to supported both online and offline frame processing.

Software Engineering Intern

Dick's Sporting Goods | DSG | Summer 2019

Built DSGU, a full-stack web app using React & Django that allows coaches to connect, share drills & routines, and find nearby coaches. DSGU provides chat and map-based communication features that allow coaches to connect.

Motion Graphics Intern

Move For Hunger | | Summer 2018

Produced motion graphics advertisings for a newly-created food drive partnership with moving companies. Storyboards and assets were created in Illustrator and animated in After Effects' keyframe & scripting interface.

Leadership

more at **cardadfar.com/experience**

Teaching Assistant

Computer Graphics | 15-462 | Fall 2019 & Fall 2020

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

Parallel Computer Architecture | 15-418 | Fall 2020

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**

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.

Object-Based Light Stabilizer

< cardadfar.com/projects#object-illum />

Designed a novel relighting algorithm that independently relights CV-detectable objects from background to preserve varying BRDFs.

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.

Autonomous Environmental Texturing

< cardadfar.com/projects#gan-theft-auto />

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