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 support 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.