GRAHAM FELTON

MSCD, BS Arch
Machine Learning, Computational Design, Architecture

gtf@andrew.cmu.edu
+1 (925) 451-6711

ABOUT

| ML & Architecture | I am a student, researcher, and computational designer at Carnegie Mellon University. My work focuses on machine learning methods for augmenting 3D understanding. I am particularly interested in methods for generating 3D data using deep learning models and their applications for design practices. |

EDUCATION

Carnegie Mellon University

Master of Science in Computational Design
- Awards
  - Academic Merit Scholarship

August 2024 - May 2026
2 years

University of Utah

Bachelor of Science in Architecture
- Awards
  - Academic Dean's List (Multiple Years)

August 2018 - May 2023
5 years

PROFESSIONAL EXPERIENCE

Payette
Boston, USA

Computational Design Internship
- Created a style transfer LoRA model by fine-tuning Stable Diffusion on a custom dataset of sketches from an in-house architect.
- Prototyped a 3D reconstruction pipeline using Python, COLMAP, and Postshot for building large-scale Gaussian Splat Scene Representations based on panorama data scraped from Apple Lookaround.
- Assisted in creating visualizations for new Johns Hopkins Life Sciences Building.

May 2025 - August 2025
3 months

Carnegie Mellon University
Pittsburgh, USA

Graduate Research Assistant
- Responsible for documentation and visualization of bioclimatic research on architectural ceramics using Rhino 3D and Grasshopper.
- Position reported directly to Carnegie Mellon University's School of Architecture Program Head, Omar Khan.

August 2024 - December 2024
4 months

Think, AEC
Salt Lake City, USA

Junior Architect
- Designed and assisted in the creation of a Revit-based design pipeline for conceptualizing a 500+ unit hotel layout.
- Created Dynamo scripts to assist drafting teams by automating repetitive tasks using Python, Revit, and Dynamo.

June 2023 - July 2024
1 year

RYZIN
Remote

3D Artist
- Digitally modeled and textured props for *Call of Duty: Modern Warfare (2019)* using 3DS Max, Adobe Substance Painter and ZBrush.

May 2021 - August 2021
3 months

RELEVANT COURSEWORK

15-112
Carnegie Mellon University

Fundamentals of Programming

Fall 2024

10-606
Carnegie Mellon University

Mathematical Foundations for Machine Learning

Fall 2024

10-607
Carnegie Mellon University

Computational Foundations for Machine Learning

Fall 2024

11-685
Carnegie Mellon University

Introduction to Deep Learning

Spring 2025

17-637
Carnegie Mellon University

Web Application Development

Spring 2025

10-623
Carnegie Mellon University

Generative AI

Fall 2025 (Current)

16-823
Carnegie Mellon University

Learning for 3D Vision

Fall 2025 (Current)

TECHNICAL SKILLS

Coding Languages
Python, JavaScript, HTML, C++, C#

Libraries & Frameworks
NumPy, OpenCV, Mediapipe, Pandas, PyTorch,

3D/Parametric Modeling
Rhino 3D, Grasshopper, 3DS Max, nTop, ZBrush, Cinema 4D

BIM/CAD
Revit, Auto CAD, Dynamo, Revit API (Python)

Project Management
ProCore, Bluebeam Revu, BIM 360, Office 365

Creative/Visual
Adobe Photoshop, Illustrator, InDesign, Substance Painter

Fabrication
Laser cutting, CNC, 3D Printing