Moira Shooter

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Experience in developing methods for reconstructing the motion of animals from monocular views using machine learning. A background in software development for the entertainment industry and computer graphics and passionate about integrating computer vision and graphics for impactful solutions. Additionally, honed communication and mentorship abilities through my role as a teaching assistant in computer graphics and AR/VR courses.

EDUCATION

Ph.D. in Vision, Speech and Signal Processing   **Sept. 2020 - 2024**
Thesis title: Unveiling the Potential of Synthetic Data for Animal Pose Estimation   University of Surrey (UK)
Successfully completed with minor corrections
Supervised by Prof. Adrian Hilton and Dr. Charles Malleson

M.Sc. in Computer Vision, Robotics, and Machine Learning   **Sept. 2019 - 2020**
Dissertation title: Two Dimensional Pose Estimation Using Synthetic Data Based on Dogs   University of Surrey (UK)
Graduated with distinction

B.Sc. (Hons) in Software Development in Animation, Games and Effects   **Sept. 2016 - 2019**
Graduated with upper class honours (2:1)   Bournermouth University (UK)

SKILLS

Programming Languages: Python, C++, C#, Bash
Libraries: Pytorch (Lightning), OpenCV, OpenGL
Tools: Git/GitHub, vim
(3D) Software: Unity3D, Blender, Maya, Houdini

Operating Systems: Linux, MacOS, Windows
Spoken Languages: English, Dutch, French
Coding skills: @MoiraShooter (github profile)

EXPERIENCE

R&D Engineer @ Industrial Light and Magic   **2024**
Involved in developing tools for creature artists.

VFX Pipeline Intern @ GridVFX, Belgium   **2018**
Optimised the visualisation of proprietary scene description format by developing a prototype of a Autodesk Maya node using C++ and Maya's API

AWARDS

Best Paper Award   **2024**
Awarded at WACV2024 workshop on Computer Vision with Small Data with a Focus on Infants and Endangered Animals

International Student Scholarship   **2020-2024**
From the University of Surrey and DoubleMe

PUBLICATIONS

Benchmarking Monocular 3D Dog Pose Estimation Using In-The-Wild Motion Capture Data
Workshop paper @ CVPR2024, CV4Animals

DigiDogs: Single-View 3D Pose Estimation of Dogs using Synthetic Training Data
Workshop paper @ WACV2024, CV4Smalls

MV-SyDog: A Multi-View Dog Pose Dataset for Advancing 3D Pose Estimation
Short paper @ the 20th ACM Siggraph European Conference on Visual Media Production, 2023

SyDog-Video: A Synthetic Dog Video Dataset for Temporal Pose Estimation
Journal paper @ the International Journal of Computer Vision (IJCV), 2023

SyDog: A Synthetic Dog Dataset for Improved 2D Pose Estimation
Workshop paper @ CVPR2021, CV4Animals

TEACHING AND SERVICES

Teaching Assistant for AR, VR and the Metaverse (EEEM067) @ University of Surrey   **2023**
Guiding students do practical laboratory classes in developing mixed reality applications using the Meta Quest and Unity3D

Teaching Assistant for Computer Vision and Graphics (EEE2024) @ University of Surrey   **2021-2024**
Guiding students do practical laboratory classes in OpenGL graphics programming using shaders

Postgraduate Student Representative @ University of Surrey   **2021-2024**
Be a support and representative to post graduate students

Public Relations Chair   **2023-2024**
Responsible for the social media for computer vision conferences such as CVMP and 3DV

Paper reviewer
ACM SIGGRAPH European Conference on Visual Media Production, CV4Smalls Workshop, Multimedia Tools and Applications, CV4Animals IJCV special issue