王子萌

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教育背景

2020.09-2021.12 **赫瑞-瓦特大学（电子电气工程全英第 7 名） 硕士**

- 机器人专业
- 相关课程：数据挖掘与机器学习，可扩展推理和深度学习，智能机器人，多学科小组项目（机器学习主题）

2015.09-2019.06 **内蒙古工业大学 学士**

- 金属材料工程

科研经历

个人项目：

- An Analysis and Comparison of Image Dehazing and Low-light Enhancement Methods,计算机视觉课题；
- 在 Matlab 中进行计算机视觉项目，背景进行替换，通过相机矩阵逆向计算并进行镜头畸变矫正；
- 在 ROS 中， 使用机器人的传感器和激光扫描仪在模拟环境中进行避障和路径规划，自我定位和地图生成；

小组项目：

- 凸优化算法，CNN 算法和即插即用（Plug-and-Play）的解决磁共振成像中出现的图像恢复逆问题；（结果分析）
- 开发和模拟了一个完整的机械臂，模拟平台为 ROS；（运动学部分设计）
- 与水下机器人研究小组进行的合作研究,通过机器学习技术对损失的信号进行恢复；（SVM 部分的研究）

实习经历：

- 在日联科技做算法助理工程师。用神经网络进行，进行自动缺陷检测（语义分割，全流程）。

技能水平

- 作品集链接（直接点击跳转）
- 引擎方面：Unity，UE Shader 编写，渲染效果编写（3D,2D），熟悉 CG，HLSL，C#，渲染管线；
- 优化与 Debugging：使用 AssetChecker 进行静态资产优化，渲染性能测试通过 SnapdragonProfiler(Android)；
- 工作流研究：Stable diffusion 绘画(包括更精确控制通过 Lora, Controlnet)；
- DCC：Blender, MAYA 简模搭建，MAYA 的 Python + PyMel 工具编写，用 Houdini，WorldMechine 做基础的程序化；
- 具备优秀的自学能力(研究生转专业基础知识都自学补完)，喜欢探索新领域，观看最新技术，有不错的数学基础，会定期阅读前沿的一些技术性文章。熟悉计算机视觉，计算机图形学，AI 训练，Matlab，Pytorch framework。 平时会在 Github 上用 Markdown 写做项目总结，总结渲染方案，各种 bug 修复等；
- 从小就是数码爱好者，所以对各种手机硬件，PC 硬件，家用机硬件都有所了解；
- 能够以英语作为工作语言。擅长摄影，会 PhotoShop，视频剪辑和调色，有绘画基础。热爱音乐,吉他初学者；

游戏经历

第一次接触电子游戏是幼儿园看同学家电脑上的暗黑二，再到后来玩儿 GBA，NDS，PSP，PSV 开始成为玩家。12 年就开始使用 steam，17 年 NS 首发用户，所以偏核心玩家。一直喜欢画面细腻，出彩的游戏，比如更喜欢 Dota2 多于 LOL，喜欢暴雪的美术设计，原神，星铁的 NPR 渲染，和八方旅人的精致微缩景观渲染方式。

去年年末封城的原因，开始接触计算机图形学，Unity 引擎和游戏制作。发现自己完全有能力学习并进行游戏开发，加入从小就热爱的游戏行业。于是决定学习图形学，游戏渲染，等全方面的各种知识，全身心投入游戏行业，完成梦想。

Education Background

2020.09-2021.12 **Heriot-Watt University (Top 10 in Professional)** **Master**

- Robotics

Related Courses: Data Mining and Machine Learning, Scalable Inference and Deep Learning, Intelligent Robotics, Multi-Disciplinary Group Project (Machine Learning for Signal Processing).

2015.09-2019.06 **Inner Mongolia University of Technology** **Bachelor**

- Metal Material Engineering

Research experience

Personal project：

- *An analysis and comparison of image dehazing and low-light enhancement methods*, a computer vision topic.
- Conduct computer vision projects in Matlab, replace the background, reversely calculate the camera matrix and correct lens distortion.
- In ROS, the robot's sensors and laser scanners are used for obstacle avoidance and path planning, self-localization and map generation in a simulated environment.

Group project：

- Convex optimization algorithm, CNN algorithm and plug-and-play solve the inverse image restoration problem that occurs in magnetic resonance imaging. (Result analysis)
- A complete robotic arm was developed and simulated, and the simulation platform was ROS.(Design of the kinematics part)
- Cooperated with underwater robot research group, to recover lost signals through machine learning technology. (SVM part)

Intern experience:

- Worked as an algorithm assistant engineer at UFJ Technology. Use neural network to perform automatic defect detection (semantic segmentation, whole process).

Qualification

- Engine: Unity, UE shader and other rendering programming(3D, 2D), familiar with CG, HLSL, C#, rendering pipeline.
- Optimization and Debugging: Static asset optimization AssetChecker, rendering process analysis and testing SnapdragonProfiler (Android)(no actual operation without Mac).
- Workflow research: Stable diffusion painting (including Lora, Controlnet).
- DCC: Blender, MAYA simple modeling, model modification, MAYA Python + PyMel tool programming, basic procedural generation using Houdini and WorldMechine.
- Have excellent self-study ability (graduate students will complete all basic knowledge by self-study after major changed), like to explore new fields, watch the latest technology, have a good mathematical foundation, and will regularly read technical articles. Familiar with computer vision, computer graphics, AI training, Matlab, and Pytorch framework. I usually use Markdown to write project summaries on Github, summarize rendering plans, debugging.
- A digital enthusiast, so I have some understanding of various mobile phone hardware, PC hardware, and home machine hardware.
- Able to use English as a working language. Good at photography, capable of PhotoShop, video editing and color correction, and have a foundation in painting. Love music, guitar beginner

Personality

The first time I came into contact with video games was Diablo 2 on a friend’s computer. Then I started playing GBA, NDS, PSP, and PSV and became a player. I started using Steam in 2012 and became the first part users of NS in 2017, so I am more of a core player. I have always liked games with exquisite graphics and outstanding colors. For example, I prefer Dota 2 to LOL, Blizzard’s art design, Genshin, Star Rail’s NPR rendering, and Octopath Traveler’s exquisite miniature landscape rendering method.

Due to the lockdown at the end of 2022, I started to get exposed to computer graphics, Unity engine and game production. I found that I was fully capable of learning and developing games, and joined the game industry that I had loved since I was a child. So I decided to learn graphics, game rendering, and other all-round knowledge, devote myself to the game industry, and realize this dream.