

Ryan Po

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EDUCATION

CARNEGIE MELLON UNIVERSITY

BS IN COMPUTER SCIENCE
Graphics (Concentration)
Grad. May 2022 | Pittsburgh, PA
Cum. GPA: 3.95 / 4.0

ST. PAUL'S CO-EDUCATIONAL COLLEGE

Grad. May 2018 | Hong Kong

COURSEWORK

Computer Vision
Computer Graphics (TA)
Computational Photography
Machine Learning
Experimental Physics (Lab)
Introduction to Computer Systems
Fundamentals of Math in CS (TA)
Parallel and Sequential Data Structures and Algorithms
Functional Programming
Probability and Statistics
Multidimensional Calculus
Practical Data Science

SKILLS

PROGRAMMING

2+ Years Experience
Python • C • SML • Matlab
• \LaTeX • MySQL • HTML
1+ Years Experience
C# • C++ • CSS • Assembly
Familiar:
JS • iOS

LANGUAGES

Fluent in English, Mandarin and Cantonese

INTERESTS

Computational Imaging
Physics-based Rendering
Learning Based Vision
Computer Graphics

EXPERIENCE

CARNEGIE MELLON IMAGING RESEARCH ASSISTANT

June 2020 - Present | Pittsburgh, PA

- Working with **Prof. Ioannis Gkioulekas** and **Adithya Pediredla** on improving accuracy of time-of-flight imaging using Singular Photon Avalanche Diodes
- Wrote renderer for SPAD transients and implementing novel and existing transient recovering algorithms
- Link to our group: **Imaging @ CMU**

RIOT GAMES | DATA ENGINEER INTERN

Summer 2020 | Santa Monica, CA

- Intern on the Aggregations team working on the Multi-Game Data Warehouse, handling data from each of Riot Games' title games with 10M+ daily active users
- Led and shipped brand new module for tracking and alerting anomalies in incoming data each day

DELOITTE | SOFTWARE DEVELOPER INTERN

Summer 2019 | Hong Kong

- Part of the AI team, led and produced a proof of concept for Jockey Tracking interfaces for identifying jockeys during races
- Recognition and tracking algorithm trained based on YOLOv3, achieves >95% accuracy with under 1 hour of training footage

TEACHING

COMPUTER GRAPHICS (15-462) | SPRING 21

- Teaching assistant for course serving as intro to graphics covering topics such as rendering, animation, geometry, imaging and more

MATH FOUNDATIONS FOR CS (15-151) | FALL 19

- Led bi-weekly recitations, grading and creating course content for introductory course to discrete mathematics

PROJECTS

OPTICAL FILTERING METHODS FOR SPAD

- Investigating methods for improving SPAD performance through optical filtering techniques. Proposed novel methods in depth imaging and FLIM using SPADs.
- Poster for project found [here](#)

ADAPTIVE SPAD WITH DEPTH PRIORS

- Developed adaptive models for recovering transient given a prior distribution on depth achieving above 5x increase in performance in comparison to conventional methods
- Project paper found [here](#)

JOCKEY RECOGNITION | PYTHON/C/C++/KERAS/OPENCV

- Created tool for tracking jockey names during races, using a custom trained neural network as part of POC for Deloitte. Video demo found [here](#)