ALEXANDER RADCHENKO

Philadelphia, Pennsylvania, USA · +1 929 641 3080
alex.and.radchenko@gmail.com · www.linkedin.com/in/xaler · github.com/Xaler1

My experience and areas of interest are in Machine Learning and Data Science. And now I am specializing in Deep Learning, Computer Vision, and Reinforcement Learning as applied to Robotics, as well as other fields.

EDUCATION

JUNE 2025 (EXPECTED GRADUATION)
UNIVERSITY OF PENNSYLVANIA MASTERS IN ROBOTICS
Coursework: Deep Learning, Graph Neural Network, Computer Vision
First year student specializing in Computer Vision and Reinforcement Learning as applied to Robotics. GPA: 3.9

JUNE 2023
UNIVERSITY OF ST ANDREWS BACHERLOR'S IN COMPUTER SCIENCE
Coursework: Signal Processing, Machine Leaning, Natural Language Processing, Statistics, Linear Algebra, Differential Equations
Graduated with a 4.0 GPA; Admitted directly to the second year; Achieved the highest average grade in Junior Honors year; Placed on the Dean's List every year

2022
COURSERA ADVANCED TENSORFLOW TECHNIQUES SPECIALIZATION
Five-month online course (https://www.coursera.org/specializations/tensorflow-advanced-techniques)

RESEARCH AND WORK EXPERIENCE

SEPTEMBER 2022 – APRIL 2023
UNIVERSITY OF ST ANDREWS DISSERTATION ON "LANGUAGE REASONING WITH VISUAL CUES"
- Researched ways of linking large language models with visual models in order to achieve end-to-end task planning and execution
- Focused on combining natural language instructions with environment observations to produce executable plans for a robotic system, achieved state of the art results
- Accepted and presented at the 2023 International Conference on Robotics and Automation (Cognitive Modelling Workshop)

JULY - SEPTEMBER 2022
FEATURESPACE CAMBRIDGE DATA SCIENCE AND MACHINE LEARNING INTERN
- Worked on behavioral analytics model robustness testing and simulated data poisoning.
- Developed various pipelines for statistical and empirical data health checks and evaluations
- Used by the company's ML research and data science teams (https://www.featurespace.com/)

JULY - AUGUST 2021
UNIVERSITY OF ST ANDREWS UNDERGRADUATE RESEARCH ASSISTANT
- Assisted a professor in investigating ways of differentiating between duplicate and near duplicate images placed in a space of the image's parameters extracted by a neural net
- Calculated the ground truth for evaluating whether local density of images affects the distance threshold for the decision

PROJECT EXPERIENCE

2022/23
ECU LEAD ON SAINT PERFORMANCE AUTOMOTIVE DESIGN
Led the development and integration of the Electronic Control Unit (ECU) and other system-critical components on the low-voltage system of the St Andrews formula student car

2021
ML FARM FINDING SYSTEM FOR AGTECH
Used TensorFlow object detection and various map APIs to create a pipeline for scanning satellite images to identify agricultural farms for Agroxy, a Ukrainian AgTech startup (https://agroxy.com/)

UNREAL ENGINE PLUGINS
Created two plugins for procedural noise generation for Unreal Engine 4 using C++ with over 80,000 downloads combined as of September 1st 2023 (https://www.unrealengine.com/marketplace/en-US/profile/Xaler)

GRAVITON ANDROID GAME
Created an arcade mobile game using Unreal Engine 4. Graviton is available through the Google Play Store

SKILLS

PROGRAMMING, GAME AND WEB DEVELOPMENT
Python; Java; C; C++; Flutter/Dart; React; MATLAB; Unreal Engine; WordPress

DATA SCIENCE/ML
Tensorflow 2.0; Pytorch; Sklearn; Huggingface; Constraint solvers; Calculus; Linear algebra