Edwin Arkel Rios
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Education

National Chiao Tung University Hsinchu, Taiwan
Master of Science in Electrical Engineering and Computer Science *July 2019 - Present*
- Relevant coursework: Image Processing, Deep Learning, Machine Learning, Applied Computer Vision, Intelligent Fog Computing Systems
- Cumulative GPA: 4.30/4.30

National Cheng Kung University Tainan, Taiwan
Bachelor of Science in Energy Engineering *Sept. 2015 - June 2019*
- Relevant coursework: Signal Processing, Automatic Control, Optimization Design, Numerical Analysis, Introduction to Artificial Intelligence, [Machine Learning, Introduction to Data Science] (Coursera)
- Cumulative GPA: 3.76/4.30

National Taiwan University Taipei, Taiwan
Chinese Language Division Language Center *Aug. 2014 - Aug. 2015*

San Agustin School Panama, Panama
High School Diploma in Science and Arts *Mar. 2011 - Dec. 2013*

Skills

Languages: Spanish (native), English (fluent), Mandarin Chinese (proficient)

Software and programming: Python (NumPy, matplotlib, pandas, sci-kit learn, TensorFlow, Keras, PyTorch), Linux, Bash, MATLAB, C++, OpenCV, SolidWorks, LaTeX, HTML, Arduino, OpenFOAM

Achievements

2020 Academic Achievement Award during R.O.C. Academic Semester 108-1 and 108-2 *NCTU, Hsinchu*

2018 Outstanding Student during R.O.C. Academic Year 105 and 106 *NCKU, Tainan*

2013 Highest cumulative GPA of Class 2013: 4.53/5.00 *San Agustin School, Panama*

2013 Silver and gold medal in National Physics Olympics *Republic of Panama*

Experience

NCTU's Parallel Computing Systems Lab *July 2019 - Present*
- Researched camera video for bio-signal detection (RPPG) algorithms for facilitation of remote AI-assisted health care. Implement algorithms, perform result analysis and presentation, organize group efforts.
- Conduct literature survey, assessment and exposition, to introduce our team to the state-of-the-art in the field while judging advances made by different research groups across the globe, and also understand the current gaps in the literature to propose promising research directions.

Applied Computer Vision *Sept. 2020 - Present*
- Implemented object classification and detection on long-tailed anime character dataset using PyTorch.

Intelligent Fog Computing Systems and Design *Sept. 2020 - Present*
- Implemented RPPG algorithms on edge and fog devices for better allocation of computation resources.

Digital Image Processing *Sept. 2019 - Jan. 2020*
- Based on an image deblurring Generative Adversarial Network (GAN) implemented a platform to deblur videos, and designed a GAN model to increase a video's FPS.

Deep Learning *Sept. 2019 - Jan. 2020*
- Worked as a team to implement a neural network model for autonomous self-driving car using ROS and TF.

Senior Capstone Project Design *Feb. 2018 - Jan. 2019*
- Worked with a team of engineering students to design and assemble micro wind and hydrokinetic turbines with the goal of optimizing the blades of the turbines to maximize extracted power.

NCKU's Intelligent and Embedded Control Lab *July 2017 - Mar. 2018*
- Documented, designed and set-up an experiment to collect and process EEG signals for further use in a machine learning platform, through the use of an open-source brain-computer-interface platform.

Self-Assessment

The two characteristics which describe me best are hard-working and perseverant. I am a team player with the aptitude to take leadership roles when it is required. I'm able to work under pressure, with or without supervision, in both guided and unguided environments. I believe in quality over quantity and live according to a mentality of constant self-improvement. My research interests include AI, Computer Vision, Data Science, DSP and DIP.