Ching-An Wu

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COMPUTER SKILLS

Python, C/C++, MATLAB, SQL, Git, Linux/Unix, Scala, PHP, HTML, CSS

EDUCATION

KTH Royal Institute of Technology   Aug 2017 – present
Master of Science in Systems, Control and Robotics, EECS

National Taiwan University   Sep 2011 – Jun 2015
Bachelor of Science in Mechanical Engineering
Activities and Societies: NTU Pop Dance Club, Association of HSNU Alumni, NTU Cocktail

RESEARCH PROJECTS

Reinforcement Learning for Robotic Manipulation, KTH   March 2019 – present
- Carried out research in reinforcement learning for robotic manipulation tasks at Robotics, Perception and Learning Lab, KTH
- Investigated sample efficiency for reinforcement learning given different observation and action spaces on a manipulation task.
- Improved sample efficiency by adding pre-and-post- preprocessing blocks based on established methods such as object detection and inverse kinematics

A Convolutional Neural Network model for Robot Grasp Evaluation, KTH   Sep 2018 – Dec 2018
- Built a robot grasp evaluation function with a convolutional neural network
- Designed a data pipeline to handle the imbalanced datasets by using data augmentation techniques such as random sampling
- Assessed two models with different model settings based on their accuracy and f1-score

Character-Level Text Classification with Different RNN Architectures, KTH   May 2018 – Jun 2018
- Built a character-level recurrent neural network to classify text to the respective categories
- Introduced different layers such as LSTM and GRU and benchmarked performance
- Evaluated the performance using different optimizers such as SGD, Adam and AdaGrad

Robot with Multiple Dynamic Movement Patterns, NTU   Feb 2014 – Jan 2015
- Developed a bio-inspired bipedal robot with the Teensy board with Professor Pei-Chun Lin
- Built mathematical models using Lagrange equations
- Analyzed and simulated the dynamics of the robot using MATLAB
- Project received the National Science Council Research Creativity Award

EXPERIENCE

Corporal, Republic of China Army   Aug 2015 – Jul 2016
- Duty officer for company of 30 people every other week
- Responsible for administrative tasks
- Repaired and maintain wheeled armored vehicles

Microsoft Student Partner, Microsoft   Jul 2013 – Aug 2013
- Received technical training from Microsoft Most Valuable Professionals
- Developed Windows Store apps

Vice Director, Association of HSNU Alumni, NTU   Sep 2012 – Jan 2013
- Organized alumni events such as high school uniform day, HSNU alumni week and orientation activities
- Responsible for sponsorship of local businesses in alumni events
- Increased participation of alumni in organized activities

LANGUAGES

Mandarin Chinese (native), English (fluent)

REFERENCE

Michael Welle
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Robotics, Perception and Learning Lab, KTH
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