

QIWEI(JOSHUA) YUAN, PHD

Salt Lake City, USA | 206-7470-479 | joshuayqw@gmail.com | www.linkedin.com/in/joshua-yuan-great

SUMMARY

- ECE PHD working on Machine Learning especially in Deep Learning and Reinforcement Learning
- Good at design of Learning Agent Configuration and development of regularization method
- Excellent coding skills with Python, Java and C++
- Self-motivated, problem-solving and collaborative scientist with excellent communication skills
- Looking to contribute to apply Machine Learning on real problems

PROJECTS

Regularization Method Development

(<https://arxiv.org/abs/2011.08968>)

- Design new regularization method called 'DREG' which can boost the speed and improve the accuracy of traditional deep learning especially in large batch
- Training various models(ResNet18, MobileNetV2 and VGG16) on different datasets(MNIST, CIFAR10 and CIFAR100) with new 'DREG' Method(Pytorch, CUDA, Vim, Linux-total coding involved over 5000 lines)

Scheduling-Topological Sorting with Reinforcement Learning

- Schedule memory and computation resources for each task based on task priority with Reinforcement Learning Agent-Pointer Network(achieve nearly 80% recall accuracy on huge number of task request)
- Design datasets to simulate real system request for training and evaluation(Pytorch, CUDA, Vim, Linux)
- Apply new method on model layers scheduling of Edge-TPU

Material-Thickness Selection for Device Design

- Select material and thickness for each layer of chip with Reinforcement Learning Agent-Pointer Network(Successfully Recognize special pattern by training only 16 data points)
- Modify traditional pointer network to achieve twin decoding requests for material and thickness separately, build connection between them for better performance(Pytorch, CUDA, Vim, Linux)

PROFESSIONAL EXPERIENCE

University of Utah

Research Associate

Salt Lake City, UT, USA

Nov~Dec 2019

- Develop an inference engine to mimic the inference process of DNN based on Tensorflow

Schneider Electric

Project Leader(Experienced Technical Engineer)

Shanghai, China

2014~2017

- Responsible for global project launch, technology management and trouble shooting

KOITO CO., LTD

Senior Mechanical Engineer(Production Equipment Design and Manufacture)

Shanghai, China

2010~2014

- Responsible for Design and Manufacture of new Production Machines, Development and Management of Innovative Technology

EDUCATION

University of Utah

Doctor of Philosophy(GPA: 3.9/4)

Salt Lake City, UT, USA

Jan 2020~

- ECE Phd working on Machine Learning especially in Deep Learning and Reinforcement Learning

University of Washington

Master of Science in (Mechanical)Engineering(GPA: 3.73/4)

Seattle, WA, USA

Sep 2017~ Jul 2019

- Dynamic Control and Robotics

University of Shanghai for Science and Technology

Bachelor of Engineering(GPA: 3.37/4)

Shanghai, China

Sep 2006~ Jun 2010

- Mechanical Design, Manufacture and Automation

OTHER SKILLS

Program Language Python, Java, Matlab and C++