

# Oort Systems LLC

Lead Investigator: Peter Jin

# Research Areas of Interest

- High-performance AI/ML/deep learning systems
  - Enabling AI/ML software to train on large-scale datasets on distributed, parallel hardware
- Algorithms and theory for deep learning, reinforcement learning

# Our Unique Capabilities

- Deep learning, distributed AI/ML systems, HPC
  - **Gossiping SGD** (Peter H. Jin, Qiaochu Yuan, Forrest Landola, Kurt Keutzer. “How to scale distributed deep learning?” NeurIPS MLSys Workshop 2016. URL: <https://arxiv.org/abs/1611.04581>) — work supported by DARPA, ORNL (OLCF)
  - **Spatially parallel convolutions** (Peter Jin, Boris Ginsburg, Kurt Keutzer. “Spatially Parallel Convolutions.” ICLR 2018, Workshop Track. URL: <https://openreview.net/forum?id=S1Yt0d1vG>)
- Deep reinforcement learning
  - **Advantage-based regret minimization** (Peter Jin, Kurt Keutzer, Sergey Levine. “Regret Minimization for Partially Observable Deep Reinforcement Learning” ICML 2018. URL: <http://proceedings.mlr.press/v80/jin18c.html>)

# Collaboration

- We seek to work with partners with expertise including:
  - Multi-spectral data analysis, multi-sensor data fusion, radiative transfer
  - Remote sensing, space- and air-borne imagery, photogrammetry and geo-registration
- Prime

# Contact Information

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