

Yudong Li

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Education

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|---|-----------------------------------|
| Georgia Institute of Technology
<i>Master of Science in Computer Science (GPA: 4.00 / 4.00)</i>
• Relevant Coursework: ML, DL, RL, AI, CV, Natural Language, Graduate Algorithms, OS, Info Security, Bayesian Stat | Expected Dec. 2025
Atlanta, GA |
| The University of Alabama
<i>PhD in Materials Metallurgical Engineering (GPA: 3.92 / 4.00)</i>
• Relevant dissertation work: Developed and implemented mathematical models to optimize the physics and chemical conditions of a plasma reactor for material processing. | May 2019
Tuscaloosa, AL |

Experience

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| National Renewable Energy Laboratory
<i>Research Engineer/Team Lead</i>
• Technical stacks: Python, C++, Pytorch, TensorFlow, Sci-kit Learn, Flask, Vue.js, MongoDB, Qt, CI/CD, MLOps
• Leading a cross-functional team in developing and deploying reinforcement learning algorithms to optimize the operation of different processing reactors.
• Leading a small team of software engineering and technicians to develop deep neural network models for the application of material fast characterization. (Pytorch, TensorFlow)
• Leading the development and implementation of physics based softwares to perform systematic parameter estimation based on various optimization techniques for real-world performance prediction. | Oct 2019 – Present
Golden, CO |
| The University of Alabama High Performance Computing (UAHPC) group
<i>Student Assistant (system admin)</i>
• Worked as a system admin to assist the daily management, troubleshooting, user training for our high performance computer clusters.
• Assisted major upgrade of the system OS of the UAHPC with testing and fixing breaking changes, software migration issues.
• Developed high performance simulation code using C++ to enable various simulation needs. | Aug 2018 – Dec 2018
Tuscaloosa, AL |

Projects

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- Webapp hosted on company local network: scalable multi-user cyclic image annotation for dataset generation**
Pytorch, TensorFlow, Flask, Vue.js, MongoDB, CI/CD, Kubernetes, github workflow
- Machine translation using transformers from ground up**
Embeddings, implementation and training of transformers
- Multi-agent cooperative learning using Proximal Policy Optimization**
Pytorch, MAPPO implementation
- Multi-modal learning and training of an autonomous driving agent for the AWS DeepRacer environment**
Actor-critic models, PPO, Stereo-Vision, LIDAR
- Distributed web file server implementation with C and C++**
C, C++, Network programming, IPC, gRPC, etc.
- Simulation code: modeling packed bed system in chemical processing**
C++, Python, SQL [<https://doi.org/10.1016/j.cej.2021.128918>]
- High performance simulation software: modeling the rotation disc mill**
C++, [<https://doi.org/10.1021/acssuschemeng.1c01773>]
- Opensource Cluster analysis and visualization code: 3D atomic tomography analysis of solid state materials**
Python, Qt - <https://github.com/YudongLi90/APT-ClusterAnalysis.git>