

# Yiran WU

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## 🎓 EDUCATION

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**University of California San Diego (UCSD)**, La Jolla, California 10/2020 – 06/2022

*Master of Science* in Computer Science and Engineering

**Shanghai Jiao Tong University (SJTU)**, Shanghai, China 09/2015 – 06/2019

*Bachelor of Engineering* in Computer Science (ACM Honors Class 2015)

## 👤 PROFESSIONAL EXPERIENCE

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**Bytedance, Ltd** 01/2025 – present

*Software Engineer, ML Systems*

### ML Workload Scheduling

- Manage large-scale GPU cluster on K8S
- Develop overselling strategies of GPU quota by leveraging history usage patterns
- Convert spot resource into guaranteed resource with time window

### Optimization of Compute Resource Utilization

- Core services for resource usage metrics collection on large-scale k8s clusters
- Critical data pipelines for resource usage data processing and aggregation
- Service components for automatic resource borrowing and scaling

**MOLOCO, Inc** 07/2022 – 12/2024

*Software Engineer, Data Infrastructure*

### Data Pipeline Development

- Expertise on SQL and NoSQL databases, e.g. Google BigQuery, Spanner, Bigtable
- Design database schemas and data pipelines based on business needs
- Manage data pipeline execution with Dataflow and Airflow

### Cloud Infrastructure

- Cloud infrastructure management with Terraform
- Container orchestration with Kubernetes (cut org-level K8S cluster spending by 30%)
- CICD workflow development using Github action

## 📁 RESEARCH EXPERIENCE

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**Research Intern @ University of California San Diego** 06/2019 – 01/2022

*Algorithm Learning*

- Explored learning algorithms/programs using graph neural networks with reinforcement learning and imitation learning.
- Experimented various techniques to approach better policy generalization of deep reinforcement learning.
- Co-authored research paper [Improving Policy Optimization with Generalist-Specialist Learning](#) (ICML 2022)

**Research Intern @ Shanghai Jiao Tong University** 09/2018 – 06/2019

*3D Learning for Pointclouds*

- Explored spatial operators and network architectures for 3D learning, especially pointcloud segmentation.
- Proposed a novel operator that better captures local spatial information in neural networks.
- Wrote CUDA kernels for parallel computation of spatial operators.
- Co-authored research paper [PointSIFT: A SIFT-like Network Module for 3D Point Cloud Semantic Segmentation](#)

## 🏆 AWARDS

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- *Bronze Medal* in National Olympiad in Informatics (NOI) 2014 of China 07/2014
- *Honorable Mention* in The International Mathematical Contest in Modeling (MCM) 09/2016

## ⚙️ SKILLS

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- Programming: C++, Python (for ML/DS), Java
- Mathematics: linear algebra, probability theory, statistical machine learning, convex optimization
- Competitive Programming: 5+ years experience, Codeforces [candidate master](#) ([link](#))