LINXIA GONG

Machine Learning Engineer
Authorized to work in Switzerland with permit B, due to family reunion in progress.

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EDUCATION

Télécom ParisTech (EURECOM campus) — Master's Degree in Communication System Security
September 2015–September 2017 — **GPA 3.83/4.0** — Biot, France

Zhejiang University — Bachelor's Degree in Control Science and Engineering
August 2011–June 2015 — **GPA 3.92/4.0** — Hangzhou, China

EXPERIENCE

Research Engineer
Sea AI Lab, Sea Limited
Singapore — 2021 – Now

Image and Video Processing

- **SAM based Research Investigation:** utilized annotations from Segment-Anything model to optimize depth prediction models.
- **Speech-driven 3D Talking Avatar Synthesis:** reconstructed 3D representation of speaker from source video and animated a talking avatar based on input speech using NeRF and Diffusion model.

Reinforcement Learning Research and Engineering

- **Reinforcement Learning for Combinatorial Optimization:** built a neural combinatorial solver based on Reinforcement Learning algorithms.
- **AlphaStar AI:** trained the AlphaStar AI model to achieve an 80% win rate against very-hard built-in AI in StarCraft II.
- **RL Engineering Support:** worked on module development and framework refactoring, for applying state-of-art techniques and improving time and memory efficiency; supported experiment deployment on TPUs and GPUs.

User Modeling Research Engineer
Fuxi AI Lab, Netease Games
Hangzhou, China — 2017 - 2021

Anti-Fraud Detection | KDD

- **Anomalous Behavior Detection:** detected cheating players and provide evidence to justify punishments based on sequential behaviors. Paper accepted at KDD'2018.
- **Other Detections:** supported the development of risky trade detection, trajectory detection and hack detection.

Players Matchmaking | KDD,GDC,CIKM

- **Matchmaking Services:** built model-as-a-service APIs that arrange players into teams to maximize their overall engagement in player-versus-player competitions, based on reinforcement learning and combinatorial optimization algorithms. Papers accepted at KDD'2020 and KDD'2021; work presented at GDC'2021.
- **Win and User Engagement Prediction Models:** built models to estimate the matchmaking quality, based on graph embedding algorithms and game theory method (SHAP).
- **In-game Win Prediction and News Generation:** built real-time commenting API service of match status. Paper accepted at CIKM'2020.

PUBLICATIONS

KDD'2021	Globally Optimized Matchmaking in Online Games
KDD'2020 (Oral)	OptMatch: Optimized Matchmaking via Modeling the High-Order Interactions on the Arena
CIKM'2020	Match Tracing: A Unified Framework for Real-time Win Prediction and Quantifiable Performance
CIKM'2019	GMTL: A GART Based Multi-task Learning Model for Multi-Social-Temporal Prediction in Online Games
KDD'2018	NGUARD: A Game Bot Detection Framework for NetEase MMORPGs

SKILLS

Programming: Python, Cython, SQL, Shell
Data Science: PyTorch, Jax, Keras, Tensorflow, NumPy, scikit-learn
Other Tools: Kubernetes/Ray/Docker, Git, Airflow, HTML/CSS/JS, CI/CD, LaTex
Languages: Chinese (native), English (fluent), French (intermediate)