Aijun Bai
Résumé

EXPERIENCE

⌂ | Redmond, WA 98052
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MAY 2017 — PRESENT

Researcher, Microsoft Cloud & AI
Cognition Intelligence

Developed reinforcement learning based pipeline optimization algorithms for computer vision tasks. Implemented in Python with PyTorch and applied on OCR and object detection pipelines with significant improvements. Publish in progress.

APRIL 2015 — MAY 2017

Postdoctoral Researcher, UC Berkeley
Hierarchical Decision-Making

Developed Markovian state/action abstractions for MDPs via hierarchical MCTS. Developed efficient concurrent hierarchical reinforcement learning algorithms. Implemented in C++ and achieved state-of-the-art results on RoboCup Keepaway task. Published 3 papers on **IJCAI** and **RoboCup Symposium**. Advised by Prof. Stuart Russell.

DECEMBER 2013 — MARCH 2015

Visiting Research Scholar, CMU
Human-Robot Interaction

Developed particle filtering over sets algorithm for multi-human tracking. Implemented in C++ with ROS and applied on CoBots – mobile service robots of CMU. Published 2 papers on **AAAI Symposium** and **Fusion**. Advised by Prof. Manuela Veloso and Prof. Reid Simmons.

SEPTEMBER 2009 — NOVEMBER 2014

Research Assistant, USTC
Hierarchical Online Planning

Developed hierarchical online planning algorithms for MDPs and POMDPs via MAX-Q decomposition. Implemented in C++ and applied on WrightEagle soccer simulation team in annual RoboCup competitions. Won 3 **World Champions** and 5 **National Champions**. Published 6 papers on **NIPS**, **ICAPS**, **AAMAS**, **ACM Trans** and **RoboCup Symposium**. Advised by Prof. Xiaoping Chen.

EDUCATION

2014 | **Ph.D. in Computer Science**
UNIV OF SCI & TECH OF CHINA

2009 | **B.E. in Computer Science**
UNIV OF SCI & TECH OF CHINA

QUALIFICATIONS

- Strong research and engineering skills
- Rich **Artificial Intelligence**, **Machine Learning**, and **Robotics** experience
- Excellent interpersonal, communicating, writing and analytical skills
- Reliable, versatile, cooperative, good team member and independent worker

TECHNICAL SKILLS

CODING | C/C++, Python, BASH, Java

ENGINEERING | Linux/UNIX, PyTorch, Tensorflow, Keras, ROS, OpenCV, NumPy

EXPERTISE | Planning, (Deep) Reinforcement Learning, (Deep) Machine Learning, Computer Vision, Robotics

LINKS

HOMEPAGE | aijunbai.net

GITHUB | github.com/aijunbai

LINKEDIN | linkedin.com/in/aijunbai