Biao Jia

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EDUCATION

UNC at Chapel Hill
Computer Science Department
PhD Candidate
Expected Grad. May 2021
Advised by Dinesh Manocha

Tsinghua University
Computer Science and Technology
Department
BS in Computer Science
Grad. Jul 2014

SKILLS

Languages:
Python, C++, Java, Go, Matlab
Frameworks:
OpenCV, Tensorflow, ROS,
Tesseract, skLearn
Tools:
Git, Vim

COURSEWORK

Deep Neural Network
3D Computer Vision
Motion Planning
Computer Graphics
Natural Language Processing
Parallel Computing

RESEARCH INTERESTS

Motion Planning
Machine Learning
Computer Vision
Natural Language Processing

03.06.2018

EXPERIENCE

University of North Carolina at Chapel Hill   Aug 2016 – present
Research Assistant   Chapel Hill, NC
- Researched on the multi-agent motion planning with arbitrarily-shaped obstacles.
- Human intention prediction based motion planning for robots.

City University of Hong Kong, MBE   Jun 2017 – Aug 2017
Research Assistant   Hong Kong

- Built a application for learning manipulation of highly deformable objects like cloth using ABB YuMi.

Landscape Mobile Tech Co.,Ltd.   Jun 2014 – May 2015
Algorithm Engineer   Beijing, China
- Designed algorithms for two iOS apps: Sight and Screenshots.
- Built a mobile application classifier using image features.
- Built an OCR system for screenshots based on tesseract.

PROJECTS

Cloth Manipulation Using Random-Forest-Based Controller Parametrization
first author, submitted to IROS 2018
arxiv https://arxiv.org/abs/1802.09661
video https://www.youtube.com/watch?v=iQu85o8IFjA

Manipulating Highly Deformable Materials Using a Visual Feedback Dictionary
first author, ICRA 2018 accepted
arXiv https://arxiv.org/abs/1710.06947
video https://www.youtube.com/watch?v=AVNZy05KrPc

Generating Realtime Motion Plans from Attribute-Based Natural Language Instructions Using Dynamic Constraint Mapping
submitted to ICRA 2018
arXiv https://arxiv.org/abs/1707.02387

Resolution-Complete Multi-agent Motion Planning with Arbitrarily-Shaped Obstacles
submitted to AAAI 2017

Pedestrian Segmentation after Detection
Thesis advised by Haizhou Ai, 2014