

# Biao Jia

## Curriculum Vitae

University of North Carolina at Chapel Hill  
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### Education

- Aug.2016- Present **University of North Carolina at Chapel Hill**, *ph.D candidate*, advised by Dinesh Manocha.
- Sept.2010- July.2014 **Tsinghua University**, *Beijing*, B.Eng, Computer Science and Technology.

### Relevant Skills

- Language C++, Python, Matlab, Bash
- Framework ROS, OpenCV, OpenAI, Flask

### Employment History

- July.2014- May.2015 **Landscape Mobile Tech Co.,Ltd.**, *Beijing*, Algorithm Engineer.
- Designed algorithm for two iOS apps: Sight and Screenshots.
- Built an iOS application dataset and a application classifier with interns.
  - Enhanced the OCR rate on screenshots of tesseract by rebuilding models and rewriting functions.
  - Designed an algorithm to grab the icons and pictures on the screenshots.

### Research Experience

- Nov. 2014 **Density Equalization: Efficient Occluded Prediction and avoidance for Multi-agent Motion Planning**, *AAMAS 2017*, coauthor with Liang He, Dinesh Manocha.  
A real-time multi-agent motion planning algorithm which can handle narrow-passage problem.
- Aug. 2016 **Resolution-Complete Multi-agent Motion Planning with Arbitrarily-Shaped Obstacles**, *AAAI 2017*, coauthor with Liang He, Dinesh Manocha.  
We highlight its performance on challenging 2D benchmarks and highlight the benefits over prior methods.
- Spring.2014 **Pedestrian Segmentation after Detection**, *Diploma Project*, advised by Ai Haizhou.  
Apply superpixel segmentation, probabilistic model and sparse coding to compute the segmentation confidence map. Highlight in computing efficiency.
- Summer.2013 **Context based Binary Image Retrieval based on Visual Vocabulary**, *Hong Kong Polytechnic University*, submitted to ICPR 2014.  
Application of this algorithm is to patent image retrieval.

### Awards

- Nov. 2011 **Beijing Marathon**.
- Sep. 2011 **Scholarship in Tsinghua University** , *3rd Place*.
- Nov. 2008 - Nov. 2007 **National Olympiad in Informatics in Provinces**, *1st Prize*.