

# Fangting Xia

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## SKILLS

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- Proficient in C, C++, Java, C#, Matlab, and R
- Good at Data Structures and Algorithms
- Familiar with JS, SQL, Python, OpenCV, Caffe, MPI, logical programming
- Five years' experience in Machine Learning and Computer Vision
- Four years' experience in Statistical Modeling, Data Analysis and optimization methods

## EDUCATION

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### University of California, Los Angeles 09/2011 ~ 09/2016

- Ph.D. in Statistics. Research assistant in Center for Cognition, Vision, and Learning, UCLA
- **GPA:** 3.989                      **Research Topics:** computer vision, human parsing, statistical modeling
- **Important Courses Learned:** Machine Learning and Pattern Recognition, Convex Optimization, Statistical Modeling and Learning in Image Science, Monte Carlo Optimization, Regression Analysis, Advanced Modeling and Inference, Database Systems

### University of Science & Technology of China 09/2007 ~ 07/2011

- B.Eng. in Computer Science      **GPA:** 4.03 (Rank: 1/156)
- **Important Courses Learned:** Foundation of Algorithms, Graph Theory, Computer Network, Foundations of AI, Compiler Principles and Techniques, Database Systems and Applications, CPU Design and Testing

## PAPERS

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- **Zoom Better to See Clearer: Human and Object Parsing with Hierarchical Auto-Zoom Net (Accepted by ECCV 2016)**  
This paper presents a unified and effective CNN network structure that handles part parsing and scale estimation simultaneously, exceeding state-of-the-art methods by a large margin in part parsing tasks. Compared with previous models, our model can explore much finer scales and is especially better at segmenting small objects and small parts.
- **Pose-Guided Human Parsing using AND/OR Graph with Deep-Learned Features (Accepted by AAAI 2016, Oral Presentation)**  
This paper presents an effective method that parses a pedestrian image into semantic parts such as hair, face, upper-clothes, arms, etc. The method integrates pose information and deep-learned models into a dedicated three-stage pipeline, which exceeds the state-of-the-art considerably.
- **The Application of ASP and Ontology on Home-Service Robots**  
This paper won the USTC Best Undergraduate Paper Award, summarizing my work in the Home Robot Team of USTC. It describes how to perform task planning by logical programming and how to free the robot from a fixed vocabulary by means of Ontology.

## HONORS & AWARDS

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- **The 2010 Guo Moruo Scholarship**  
Aiming to honor the best student in a major by their three-year academic performance and integrated skills.
- **The 2010 Google Excellence Scholarship**  
Aiming to honor students talented in academic study and technical projects.
- **The Bronze Medal in the ACM-ICPC Asia Harbin Regional Contest, 2009**
- **The National Scholarship of China, 2008 and 2009**

- **The 2<sup>nd</sup> Prize in the National Robot Competition, Intelligence Challenge, 2009**

## **RESEARCH & INTERN EXPERIENCE**

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### **Research Assistant in Center For Cognition, Vision, and Learning, UCLA** 09/2011 ~ Present

I am a graduate student in Prof. Alan Yuille's group. My research focuses on compositional models and deep models for human-centered applications, such as human part segmentation, human pose estimation, multi-view human head detection, human skin detection, etc.

### **Intern at DoubleClick Search, Google, Kirkland** 06/2015 ~ 09/2015

DoubleClick Search created and maintains a search-engine marketing platform for advertisement agencies, which consolidates reporting, optimization and conversion tracking. Hosted by Yunbo Deng in the Inventory Team, my project is about investigating the potential bottlenecks in the current system, prototyping fixes and implementing them in production to improve the back-end statistics serving performance.

### **Intern at the AdSense Team, Google, MTV** 06/2013 ~ 09/2013

I interned at the Content Ads AdSense Team of Google for three months, hosted by Xincheng Zhang. Being part of the Aslan Project, a user targeting system, my project incorporates entity signals into Aslan's offline evaluation pipeline for expansion and matching algorithms, enabling advertisers to define their target audience more freely.

### **Intern at the Web Search & Mining Team, Microsoft Research Asia** 12/2010 ~ 07/2011

Mentored by Prof. Haixun Wang in MSRA, I finished my undergraduate thesis: Large-scale Automatic Action Extraction For Semantic Understanding. Useful action information is extracted from billions of sentences on the web and is used for text classification and understanding.

### **Exchange Student in Prof. Alan Yuille's Computer Vision Group, UCLA** 07/2010 ~ 09/2010

As a member of 2010 CSST Research Program, I worked in Prof. Alan Yuille's Computer Vision group. My topic is about building a statistical object detection model based on key point combinations, with the help of a simpler Probabilistic Grammar-Markov model.

### **Research Assistant in the Home Robot Team, Multi-agent Lab, USTC** 07/2008 ~ 06/2011

I worked on the vision module and the reasoning module for the home robot. The vision module focuses on object detection and gesture detection; the reasoning module computes the optimum action sequence for a given task. Projects I have done include: automatic marking of objects in the lab environment, goal planning of the home-service robot by logical programming, and so on.

## **TECHNICAL PROJECTS**

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- **Design and Implement the Ontology Module to Home-Service Robots**

It is my research project in the Home Robot Team of USTC. This module enables the robot to understand common concepts instead of a fixed vocabulary list. I conducted a broad survey of Ontology, tested multiple APIs, and finally finished the module that provides real-time support for task planning.

- **Write a Webpage Game: Jigsaw Puzzle**

As a participant of the 2009 Google Gadgets Competition, I wrote this webpage game and made into the final. Many users adopted this gadget on their iGoogle webpages. This project was built from scratch.

- **Write a Multi-user Chatting Room (using MFC and Socket)**

- **Write a Small Library System (using JSP and Java)**

- **Write a Compiler for a Java-like Language (collaborated with another classmate)**