

# Aiyu Cui

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*Seeking internship in Computer Vision field for Summer 2019*

## Education

### University of Illinois at Urbana-Champaign

PURSUING PH.D. IN COMPUTER SCIENCE

*Urbana, IL*

*Aug. 2018 - Present*

### Pennsylvania State University

B.S. HONOR IN COMPUTER SCIENCE AND MINOR IN MATHEMATICS (GRADUATED WITH MAGNA CUM LAUDE)

*State College, PA*

*Aug. 2014 - May 2018*

## Selected Research Experience

### Computer Vision Group (UIUC)

GRADUATE RESEARCH ASSISTANT

*Urbana, IL*

*Aug. 2018 - Present*

- Supervised by Prof. *Svetlana Lazebnik*
- Conduct research on scene understanding, especially on image phrase localization
- Leverage deep learning and large-scale dataset

### Laboratory for Perception, Action and Cognition (Penn State)

UNDERGRADUATE RESEARCHER

*State College, PA*

*April 2017 - June 2018*

- Supervised by Profs. *Robert Collins* and *Yanxi Liu*
- **Multiple Object Tracking**
  - Accurately track >70 indistinguishable infrared markers put on human subjects for long sequences
  - Correctly fill long gaps by encoding human body geometrics to predict marker's trajectories
  - Reduce motion capture data cleaning time from 10 hours manually to 5 minutes automatically
- **Motion Analysis on Skeletal Data**
  - Compare the performances of different subjects on a same sport quantitatively precisely
  - Automatically give feedback to users about how to adjust their motions to improve a sport performance
  - Predict center of mass of subjects by leveraging foot pressure data and motion capture data

## Selected Projects

E-COMMERCE WEBAPP: YABE

*Jan. 2018 - April 2018*

- Enable users to buy/sell/bid; Implemented with Django; Deployed on Microsoft Azure

ANIMALS CLASSIFICATION VIA TRANSFER LEARNING ON CNN

*March 2017 - April 2017*

- Achieve 90% accuracy by fine-tuning with Multi-layer perceptrons (MLP) and Support Vector Machine (SVM)

## Skills

PROGRAMMING LANGUAGE

- **Matlab, Python, C/C++, LaTeX, OpenGL, Django, HTML/CSS**

MOTION CAPTURE

- Experience with **Nexus Vicon** motion capture system
- Familiarity with collecting and recording motion capture data of default human subject model and self-defined models
- Expertise with cleaning raw motion capture data in terms of gap filling and error correction manually and automatically