Aiyu Cui

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Seeking internship in Computer Vision field for Summer 2019

Education

University of Illinois at Urbana-Champaign   *Urbana, IL*
Pursuing Ph.D. in Computer Science   *Aug. 2018 - Present*

Pennsylvania State University   *State College, PA*
B.S. Honor in Computer Science and Minor in Mathematics (Graduated with Magna Cum Laude)   *Aug. 2014 - May 2018*

Selected Research Experience

Computer Vision Group (UIUC)   *Urbana,IL*
Graduate Research Assistant   *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)   *State College, PA*
Undergraduate Researcher   *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