

JEONGKEUN SHIN

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jakeshin45.github.io

RESEARCH INTERESTS

Social Computing & Human Computer Interaction

EDUCATION

- | | |
|---------------------|---|
| Jan 2020 - May 2021 | Carnegie Mellon University |
| M.S. | Electrical and Computer Engineering |
| | GPA : 4.00/4.00 |
| | Advisor: Professor Marios Savvides |
| Sep 2017 - Dec 2019 | University of Michigan Ann Arbor |
| B.S.E. | Computer Science, <i>Cum Laude</i> |
| | GPA : 3.40/4.00 |
| Sep 2012 - Dec 2013 | University of Illinois at Urbana-Champaign |
| Jan 2016 - May 2017 | Mathematics Computer Engineering |
| Transferred | |

RESEARCH EXPERIENCE

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| Feb 2020 - Now | CyLab Biometrics Center |
| | Graduate Research Assistant Advised by Professor Marios Savvides |
| | <ul style="list-style-type: none">Developed the self-supervision tool that automatically measures the degree of angle of the given price label image, then adjusts the skewness, and minimizes the light reflex to improve the success rate of product and price label matching.Contributed to the performance improvement of product detection from the Walmart shelf images by building the detection model with combining <i>state-of-the-art</i> deep learning techniques.Implemented the user interface for simulation of the real-time product detection to determine our detection model's weak pointsDeveloped several web applications that enable fast and convenient data cleaning to filter out outlier images from large image datasets. |
| Jan 2018 - Dec 2018 | Crowd + Machine (CroMa) Lab |
| | Undergraduate Research Assistant Advised by Professor Walter Lasecki |
| | <ul style="list-style-type: none">Developed the web application that facilitates human resource management. This app collects daily progress from each lab member, efficiently organizes responses, then clearly visualizes results to project team leaders.Researched about filtering the misinformation from the Internet news article using crowdsourcing technique which avoids potential biases from crowds by asking them to find logical fallacies from the articles rather than directly asking crowds to find the misinformation.Developed the various web applications that train and collect responses from the crowd workers. |
| Jan 2017 - May 2017 | Illinois Geometry Lab |
| | Undergraduate Research Scholar Advised by Professor Xin Zhang |
| | <ul style="list-style-type: none">Designed the fast and efficient algorithm that generates massive numerical dataset that belongs to the subgroup of given condition.Run simulations using datasets to observe the local-global phenomenon from group orbits. |

PRESENTATIONS

[\[Brochure\]](#)
[\[Presentation\]](#)
[\[Paper\]](#)

Jake Shin, Yike Xu, Catherine Zhang, Xin Zhang, JunXian Li, Xin Zhang (2017), “*Finding Integers from group orbits*”, Illinois Geometry Lab Spring 2017 Open House

ACADEMIC PROJECTS

- Spring 2020 **Cozmo : Partial Cube Detection**
- Developed the function that enables a Cozmo robot to detect the cube object even if it is partially shown in its camera vision, predict the location of the partial cube, then turn its direction to that location until Cozmo sees the full figure of the cube objects using deep learning skills.
- Spring 2019 **Testing Detector-Descriptor Performance**
- Replicated Mikolajczyk’s work to compare performances of six computer vision detector-descriptors (SIFT, SURF, KAZE, AKAZE, ORB, and BRISK) in various image conditions.
 - Researched about the levels of light intensity on the performances of four computer vision detector-descriptors (SIFT, SURF, AKAZE, and BRISK)
- Fall 2018 **Stealth Game Development**
- Developed the 1vs1 3D stealth game, *Now Museum, Now You Don’t*, where one player tries to steal the trophy from the museum, and the other player tries to secure it.
 - Designed 3D objects and characters using Google Sketchup.

EXTRACURRICULAR ACTIVITIES

- Sep 2018 - Jan 2019 **Wolverine Soft**
- Discussed and shared the recent game development technologies, and implemented it using Unity3D.
 - Participated in the 2018 Wolverine Soft Turkey Jam Competition, and developed the smartphone game ‘Egg Hunter’ that the player avoids obstacles and gathers eggs to achieve a high score.
- Jan 2014 - Oct 2015 **Republic of Korea Army**
- Served as a sergeant, trained 1000+ Reserve Forces for wartime condition.
 - Managed the equipment and repair parts supply and database system.

SKILLS

Programming	Python, C, C++, C#, Scheme
Data Analytics / ML / DL	MATLAB, Python, OpenCV, TensorFlow, PyTorch, R
Web	HTML, CSS, JavaScript, jQuery, ReactJS, PHP, MySQL, Django
Game Development	Unity3D, Unreal Engine
Graphic Tool	Adobe Photoshop, SketchUp, Blender
Language	Korean - native ; English - fluent ;

RELEVANT COURSEWORKS

Computer Science	Computer Vision, Algorithm, Programming Languages, Software Engineering, Computer Game Design, User Interface Development, Human-Robot Interaction, Human-AI Interaction, Cognitive Robotics
Mathematics & Statistics	Calculus, Abstract Linear Algebra, Abstract Algebra, Differential Equations, Number Theory, Combinatorics, Probability & Statistics, Applied Regression Analysis, Theoretical Statistics