

# Yi-Chi "Angela" Wu

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## RESEARCH INTERESTS

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### Artificial Intelligence, Robotics, and Computer Vision

- I am interested in developing and building AI-based Computer Vision applications on robots to identify objects and interact with the environment.

### Computer Graphics

- I am interested in its use in digital photography and films.

## EDUCATION

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### Rice University

*Master of Computer Science*

Houston, TX

*Aug. 2021 – Present*

### National Taiwan University

*Bachelor of Science, Department of Atmospheric Sciences*

Taipei, Taiwan

*Sep. 2017 – Jul. 2021*

- Overall GPA: 3.80/4.30 (3.78/4.00)
- Last 60 credits: 3.96/4.30 (3.92/4.00)
- CS-related GPA: 3.95/4.30 (3.92/4.00)

### University of California, Berkeley

*Summer Exchange, Department of Electrical Engineering and Computer Sciences*

Berkeley, CA

*Jun. 2019 – Aug. 2019*

- Overall GPA: 3.70/4.00

## RESEARCH EXPERIENCE

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### High-Speed Networks Labs, National Tsing Hua University

*Advisor: Nen-Fu "Fred" Huang, Distinguished Professor / Dean, College of EECS*

Hsinchu, Taiwan

*Jul. 2020 – Sep. 2020*

- Modified YOLOv3 Network to detect soybeans in videos and generated a self-labeled dataset.
- Utilized Pytorch to train a Convolutional Neural Network for soybean classification.
- Collaborated and developed in a UNIX terminal.

## PROJECT EXPERIENCE

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### Applications of AI Neural Network Models | *Pytorch, Jetson Nano*

Taipei, Taiwan

*Sep. 2020 – Jan. 2021*

- Designed an app that generates music scores according to movie scenes in real-time using Convolutional Neural Networks and Bi-LSTM with PyTorch.
- Fulfilled fruit recognition with over 100 classes of fruits using deep Convolutional Neural Network.
- Performed real-time tasks on Jetson Nano.

### Introduction to Computational Logic | *Coq, NuSMV*

Taipei, Taiwan

*Oct. 2018 – Jan. 2019*

- Proved the Chinese Remainder Theorem with Coq.
- Built a NuSMV model to reconstruct the man-in-the-middle attack to the Needham-Schroeder authentication protocol.

### NASA International Space Apps Challenge Hackathon | *Unity, C#*

Taipei, Taiwan

*Group: G. Melanophus, Project: To the Cryosphere*

*Oct. 2018*

- Developed an Antarctica-themed survival game with Unity and C#.
- Analyzed and visualized data from NASA to support the proposed theses.

## WORK EXPERIENCE

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### **AndroVideo Inc.**

*Artificial Intelligence R&D Intern*

Taipei, Taiwan

*Sep. 2020 – Feb. 2021*

- Constructed a Convolutional Neural Network with a spatial transformer network for facial expression recognition.
- Utilized TensorFlow to make a pull-up counter with pose estimation.

## PRESENTATION

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### **NASA International Space Apps Challenge Hackathon**

*Topic: Solution to Polar Quest - To the Cryosphere*

Taipei, Taiwan

*Oct. 2018*

- Presented the game and the scientific findings we got from examining the given data.

## RELEVANT COURSES

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### **Compulsories**

- Introduction to Computer Science, Discrete Mathematics, The Structure and Interpretation of Computer Programs, Data Structure, Digital Systems Design and Laboratory, Engineering Mathematics(I)-Linear Algebra, Probability and Statistics, Operating Systems, Computer Architecture, Formal Languages and Automata Theory, Graduate Object-Oriented Programming and Design, Graduate Design and Analysis of Algorithms

### **Electives**

- C/C++ Programming, Introduction to Computational Logic, Introduction to Computer Networks, Computer Vision, Applications of AI Neural Network Models, Algorithmic Robotics

## SKILLS

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### **Programming Languages**

- Python, C/C++, Java, Go, MATLAB, Fortran, JavaScript, HTML5, GrADS, C#, Verilog, Coq, NuSMV, LaTeX, RISC-V, MIPS

### **Operating Systems**

- UNIX, macOS, Windows, xv6

### **Tools**

- SAT Solvers, Unity, Docker, git, heroku

### **Languages**

- Fluent: Chinese, English; Intermediate: French; Basic: Japanese, Korean

### **Test Scores**

- TOEFL: 105/120 (L:30/30, R:29/30, W:24/30, S:22/30)
- GRE: 328/340 (Q:170/170, V:158/170, AW:3.5)