

# Yiheng Xie

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484-402-6202

## EDUCATION

B.Sc. Computer Engineering

Brown University | Providence RI, USA

<https://www.linkedin.com/in/yiheng-xie-a0828a122/>

GPA: 4.00/4.00

Sept. 2018 - May 2022

## SKILLS

### Programming Languages:

Python, Java, C, MATLAB,  
x86-64, Verilog, html/css

### Machine Learning:

Frameworks:  
Tensorflow, Pytorch  
Focus areas:  
Robotics,  
3D Computer Vision

### CAD & Prototyping:

SolidWorks, Eagle, Fusion  
360, Adobe Suite, 3D  
printing, laser cutting,  
machine shop tools,  
Arduino/Raspberry Pi

## SAMPLE COURSEWORK

### CS:

Computer Systems  
Computer Vision  
Electrical Circuits

### Engineering:

Digital IC Design  
Embedded Microprocessors  
Design of Computing Sys.  
Quantum Computation  
Communication Systems

### Math:

Honors Multi. Calculus  
Honors Linear Algebra  
Statistical Inference  
Linear Systems Analysis

## LANGUAGES

English, Chinese, Spanish

## PASSION

sailing, cycling, recycling,  
marathon, chamber music,  
creative writing, tofu

## WORK EXPERIENCE

**Unity Technologies** *Deep Learning Researcher* (Tel Aviv, Israel) **June 2020 – Present**

- Leading 3D computer vision and deep learning research at Unity Content Group (formerly RestAR, before our [acquisition by Unity](#)).

**Learnable Group** *Lead* (Boston, MA) **Jan 2020 – June 2020**

- Led a team of 5 developers to implement an AI-based grader for K-12 math problems.
- Product shipped in April 2020, serving tens of thousands of middle-schoolers in China.

**Auto-Intelligence** *Intern* (Shanghai, China) **Summer 2018**

- Delivered an automated defect-detection solution for a manufacturing client.

**Smart Chicken Coop** *Project Lead* (Westtown School) **Oct 2017 – May 2018**

- Designed and implemented a solar-powered IoT chicken coop for primary school students. Project was awarded the [Innovation Grant](#).

## RESEARCH

**Brown Visual Computing** *Project Lead* (Adv: Srinath Sridhar) **Sept 2020 – Present**

- Leading review project *Neural Fields in Visual Computing*, which surveys coordinate-based neural networks for representing continuous signals.

**HCRI Robotics Lab** (Brown University, Adv: Michael Littman) **June 2019 – Present**

- Implemented reinforced learning algorithms for teaching tasks of arbitrary complexity through natural language. Produced a large-scale research codebase.
- Topics include: planning, world models, model-based RL, GNN, MCTS.

**LEHN Nanoscience Lab** (Brown University, Adv: Robert Hurt) **Dec 2018 – Dec 2020**

- Studied mechanical properties of 2D nanomaterials. Developed algorithms for analyzing tensile testing data and optical spectroscopy data (OpenCV).
- Publication:** Cintia J. Castilho, Dong Li, [Yiheng Xie](#), Huajian Gao, Robert H. Hurt, *Shear failure in supported two-dimensional nanosheet van der Waals thin films*

## SERVICE AND LEADERSHIP

**Westtown School Diversity, Equity & Inclusion Board Member** **2018 – Present**

- Appointed by the Head of School to serve on an advisory board of trustees, alumni and faculty members. Formulate high-level policies and initiatives at my high school.

**Admissions Tour Guide** (Brown University, Westtown School) **2016 – 2019**

- Gave bilingual tours to prospective families, head of program (Westtown School).
- Gave weekly tours to large groups of prospective families (Brown University).

**Teaching Assistant** (Brown University) **2020 – 2021**

- CSCI 2952K: Hosted office hours and reading workshops for 3D computer vision seminar.
- ENGN 0040: Hosted office hours for answering homework questions.
- ENGN 1580: Staff note-taker for upper-level elective – Communication Systems.