

# Dayu Xia

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## EDUCATION

<b>Zhejiang University</b>	2022.09 - 2026.06
<i>B.Eng. in Mechanical Engineering</i>	<i>GPA: 3.744/4.0, Rank: 6/55</i>
<b>University of Illinois Urbana-Champaign (Dual-Degree Program)</b>	2022.09 - 2026.06
<i>B.S. in Mechanical Engineering (minor in Mathematics, pending)</i>	<i>GPA: 3.83/4.0</i>

## COURSEWORK

**Selected Courses:** Calculus, Differential Equations, Linear Algebra, Probability Theory, Numerical Analysis, Intro. to Computing (Python & MatLab), Thermo & Quantum Physics, Analog Circuits & Systems, Fluid Dynamics, Mechanical Design, Dynamics of Mechanical Systems

**Courses via Linkedin Learning:** Discrete Mathematics, C Programming, Applied Machine Learning: Algorithms

## SKILLS

**Languages:** Python, C, L<sup>A</sup>T<sub>E</sub>X, SQL, Julia  
**English:** TOEFL: 107, CET6: 604, CET4: 681  
**Miscellaneous:** GitHub, RNN Architecture Developing, Fusion 360, Solidworks, Adobe & Office Toolset

## ACADEMIC/INDUSTRIAL EXPERIENCE

<b>University of Illinois Urbana-Champaign</b>   <i>Research Assistant, Supervised by Prof. Dusan Stipanovic</i>	2024.06 –
Research Thesis: Robotic Rehabilitation Therapy through Trajectory & Assistance Level Planning	
<ul style="list-style-type: none"> <li>Using LSTM to predict patients' handwriting patterns via window shifting normalization</li> <li>Developing projection method for white-box training the GRU network</li> <li>Stability and linearization analysis of GRU and LSTM neural networks around equilibrium</li> </ul>	
<b>Zhejiang University</b>   <i>Research Assistant, Supervised by Prof. Meng Zhang</i>	2023.09 – 2023.12
Research Thesis: Persuasive GPT	
<ul style="list-style-type: none"> <li>Integrate ChatPDF and ChatGPT to construct knowledge embedding between users and the LLM</li> <li>Construct website frame using React and Java script, achieving an interactable purpose to collect conversation data</li> </ul>	
<b>Tellgen Corporation</b>   <i>Data Analyst Intern, Supervised by Mr. Xiaofeng Zhang</i>	2023.07 – 2023.08
Served in the Department of Applied Engineering	
<ul style="list-style-type: none"> <li>Achieve experimental data visualization through Python</li> <li>Construct classifier through algorithm such as K-Nearest Neighbor and K-Means Clustering to divide and co-analyze molecular meta data and further the infected cases</li> </ul>	

## AWARDS

<i>Participant, HKUST Summer Camp for Elite Students (Hosted by Department of IEDA)</i>	2024.07
<i>Silver Metal, China International College Students' Innovation Competition</i>	2023.11
<i>Second Prize, Zhejiang University Student Scholarship</i>	2023.09
<i>First Prize, Zhejiang University Student Winter Vacation Social Practice</i>	2023.05
<i>Honorable Mention, Mathematical Contest In Modeling</i>	2023.02
<i>Second Prize, The Chinese Mathematics Competitions</i>	2022.11

## PROJECTS

<b>Integrated report, "Multi-dimensional Comparison Report Between Chengdu and Hangzhou"</b>	2023.05
<b>Integrated report, "Prediction and Analysis of the Wordle Game"</b>	2023.02