

## PERSONAL PROFILE

I am an interdisciplinary creator who specializes in machine learning, classical Chinese poetry, and religious studies. I search for the measurable Tao of creation, applying AI and other cutting-edge technologies in unexpected areas.

## EDUCATION

University of Nottingham, Ningbo, China

Computer Science with Artificial Intelligence (2+2 program)

Year 1 GPA 3.83/4.0

Weighted Numerical Average Mark 80%

(70% is First-Class Honor)

Sep 2021 –

Present

## HONORS

Zhejiang Provincial Scholarship

2021-2022 University of Nottingham Dean's Scholarship

Oxford AI & ML Program Outstanding Certification

Consortium for Mathematics and its Applications Student Membership

Oct 2022

to be designated

Sep 2022

Oct 2022

## ENGLISH ABILITY

IELTS 7.5 Listening 9.0, Reading 8.5, Writing 6.5, Speaking 6.0

Jul 2022

## MAIN AWARDS

As Team Captain & Programmer:

**Mathematical/Interdisciplinary Contest in Modeling (MCM/ICM), M Award** (1st Prize, 7.09%)

May 2022

- organized online seminars and self-study sharing sessions and launched 2 mock contests
- predicted asteroid mining impact on global equity in five decades via multiple machine learning methods (SVM, PCA, Gray Correlation, etc.) and visualized the results
- revived morale w/ an impromptu talk when a sudden GPU failure brought the team to pressure threshold & timely resolved to switch from Python to Julia for efficiency gains
- enhanced team stress management & coordination skills and applied them in club revenue generation

**UNNC Mathematical Modeling Contest, 1st Award**

August 2022

- built an epidemiological model with a standard disease incidence extended from Lotka-Volterra system to simulate the interaction between the epidemic and Earth's biosphere

**UNNC Computer Vision Competition, 3rd Place Winner**

June 2022

- tackled problems of advanced CV program design & an extra bonus about multi-model recognition, earning the highest score of all candidates (1445 points) but the 4th-year seniors

**UNNC Hackathon, 2nd Place Winner**

Nov 2021

**M5-201 Encryption & Decoding Contest, 2nd Place Winner**

Nov 2021

As Classical Chinese Poet:

**Zhejiang Province Essay Competition, 1st Prize** (12/7000)

Feb 2021

- Dialogue of River Zhi pioneered an innovative poetic structure with 9 diverse dialects, discussed poverty alleviation & ethnic minority issues

**Zhejiang Daily & Qianjiang Evening News, Monthly Championship**

May 2015

- Song-Dynasty-style ancient poem "White Heron" called for wetland protection and moratoriums on bird hunting in a magical realist approach

**Mandarin Corner Originals, Special Prize** (1/300)

Apr 2022

- Tiger, written in Tang calligraphy & an extinct genre "Music Fu", presented a critical metaphor of modernity & war

Others:

**National Junior School Mathematics Competition, 2nd Prize**

May 2017

- one of the highest-level middle school math competitions in China, covering such topics as Corsi's inequality, Dymov's theorem, and the existence and properties of Simson's line

**UNNC Most Influential Campus Club of the Year (Sports)**

Jan 2022

- for the popularity and prestige of the club I started, Nottingham Alliance of Sports Archery

## RESEARCH/INTERNSHIP

NLP Summer Research Assistant

**Computer Science and Artificial Intelligence Laboratory, University of Nottingham, Ningbo, China**

May 26 –  
Jul 30, 2022

- explored the feasibility of Bert-like models for machine reading comprehension of small text in specialized areas
- selected and blended different classes of Bert-like models to pursue better performance on small text data obtained from medical illustration videos
- trained a field specific MRC model for medical Q&A tasks, tuning parameter, testing and evaluating the performance
- increased deep learning skillsets by interacting with supervisor and Ph.D. students; attained a deeper understanding of DL & RL formulas
- research contributed to the Ningbo Sci & Tech Innovation Program

Computer Vision Algorithm Engineer

**UNNC RoboMaster Team, Faculty of Science and Engineering**

Nov 01, 2021 –  
Jan 10, 2022

- assisted the team captain in managing the project schedule with Gantt charts
- developed and optimized the vision algorithm for the Sentry Robot (a scout agent maneuvering on a slide) and adapted YOLO5 to implement the recognition/ tracking algorithm in a competition
- deployed the project to OpenVino to interface with the hardware department
- experimented with evaluating the target recognition capabilities of the Sentry and Hero robots in the field and iterating the algorithm
- made code refactoring contributions when the framework shifted from TensorFlow to PyTorch

AI & ML Student

**University of Oxford AI & Machine Learning Summer Program (online)**

Sep 01, 2021 –  
Mar 09, 2022

- analyzed machine learning methods with detailed formula derivation and coding
- built and trained deep neural networks using TensorFlow & Keras, identified key architecture parameters & finetuned, took hands-on exercises on reinforcement learning
- attended interdisciplinary lectures and learned planning & motion control in robotics
- **Astrophysical Composition Analysis Project (Oxford Assignment)**
- scored an A & gained a high-rank scholarship (3+ ML methods required, I implemented 17)

## EXTRA-CURRICULARS

Co-founder & Vice President

**Nottingham Alliance of Sports Archery (China)**

Sep 21, 2021 –  
Current

- discovered the demand gap during online sports course selection and established the university archery club; recruited new members to explore personality and skill combinations
- controlled equipment costs and designed a reservation model; introduced a card reward strategy and joined 12 restaurants around campus to promote
- initiated archery activities below; designed targets, sampled the archery levels of the crowd & estimated the probability distribution of winning to ensure both 7 levels of diverse prize giveaways and zero waste; negotiated with charities to protect stray cats with the profits
- **Stellar Archers**
- astronomy-themed archery activities providing celestial sphere targets, professional star-gazing experience and prize draws with astronomical elements
- **An Arrow Through Aeon**
- Chinese culture theme archery activities providing painted porcelain targets I designed, traditional pot-throwing games, Han-styled garments, and prize draws with Taoism elements

Classical Chinese Poet

**Zhejiang Education Newspaper Administration, HQ; Zhejiang Daily; Qianjiang Evening News; Zhenhai High Public Channel; Mandarin Corner, UNNC**

Jul 18, 2021 –  
Current

- consistently create metrical poems in archaic Chinese and discuss social issues via them
- works have a certain influence and are appreciated by famous fiction writer Nan Pai San Shu
- **Ode to Wan Qian**
- included in the Poetry Works of Zhenhai High Public Channel for reporting the self-healing of a COVID-infected family; 200+ quarantined people inspired by this poem and escaped depression

### ➤ **Dialogue of River Zhi**

- won provincial 1st prize 12<sup>th</sup> place (12/7000) for pioneering an innovative poetic structure with 9 diverse dialects, discussed poverty alleviation and ethnic minority issues

### ➤ **White Heron**

- this Song-Dynasty-style ancient poem won monthly championship published on Zhejiang Daily, calling for wetland protection and bird hunting ban

### ➤ **Tiger**

- won special in Mandarin Corner originals, written in Tang calligraphy & an extinct genre "Music Fu", as a critical metaphor of modernity and war.

I Ching & Tarot Counsellor

### **Independent, Self-started business**

- as a Taoist, run social media and offline divination business mainly offering I Ching and Thoth Tarot services; teach other Taoism practices such as Qimen Dunjia and Tai Yi Shen Shu

### ➤ **Personal NLP Project**, How to compare occults quantitatively in the era of AI?

- constructed a model that evaluates the effectiveness of various tarots based on Barnum effect using Word2Vec word-embedding algorithm

### ➤ **Personal Front-End & NLP Project**, Thoth Tarot WeChat Applet

- developed an automatic divination WeChat applet using WXML, WXSS and JavaScript
- integrated NLP machine reading comprehension Q&A models into the applet to optimize user experience with semi-automatic replies

Mar 24, 2019 –  
Current

10K Run Enthusiast

### **Half-Marathon & 10K Run Committee, Zhejiang Athletic Association; Zhenhai High School Sports Centre**

- practiced hard in the neighborhood park, gradually increasing the running volume from 6000 meters to around 11000 meters
- insisted on completing a 10 K run once a week within 45 minutes since junior high school
- completed the Jiulong Lake Tour Run, West Lake Tour Run, and Bamboo Sea Marathon 10 km group; won the 5th place in the 1000-meter event in junior high school games; won the silver medal in the 10 km group in high school games

Aug 06, 2014 –  
Current

## **VOLUNTEER EXPERIENCES**

Machine Learning Tutor & Contest Team Leader

### **Computer Psycho Union**

- as the tutor & leader of the tech club's ML team, instructed students on the fundamentals of ML, using introductory competitions on the Kaggle platform to aid in teaching
- guided students of multiple majors to combine AI technologies into their fields to create stunning things
- fell in love with the Feynman learning technique & applied it to my religious folklore study
- after a period of training, led the team to contests related to computer science and ranked:
  - 3rd in **UNNC Computer Vision Competition** with 1445 points (25 teams competed)
  - 2nd in the **M5-201 Encryption & Decoding Contest** (RSA, SHA1, ECC algorithms, etc.).

Oct 01, 2021 –  
May 05, 2022

Caregiver of Alzheimer's Patient

### **Dongyuan Community, Hangzhou, Zhejiang Province**

- took care of community seniors, who have Alzheimer's disease by supporting them to walk for 30 minutes a day and organize regular full-body baths
- reviewed neuroscience papers to find scientific methods to relieve symptoms
- **The AlzheimerEnder Program**
  - I wrote a 40hz sound wave therapy program based on the Gamma Frequency Sensory Stimulation Method researched from Harvard and MIT papers, then set it to auto-play in different volume levels during deep and light sleep
  - extending the method to other senior lounges
  - the symptoms of 17 people improved from 6 (Moderately Severe) to 4 (Mild Dementia) on the Global Deterioration Scale

Aug 05, 2021 –  
Mar 09, 2022