



## Hsu Deng Hao(Brian)

Third-year college student

Hello HR, I am a student from the Computer Science Department at National Chiao Tung University. My GPA is 4.17/4.3 (7%) and I have received two book awards during my time at school.

I am actively seeking a summer internship to enrich my experience and resume. I am passionate about learning new things through hands-on experience and enjoy working with others to generate creative solutions and overcome challenges.

I am hoping to find a summer internship opportunity related to fields such as ML, AI, image recognition, or other related areas (but not limited to these).



### Educational background



National Yang Ming Chiao Tung University (NYCU)

2021 - till now

Computer Science Department

### Course experience

#### Machine Learning Related

I have taken four AI (ML)-related courses offered by NYCU. Through these courses, I have become familiar with various machine learning models and have gained hands-on experience using popular machine learning packages such as Pytorch, Tensorflow+Keras, sklearn, and opencv through assignments and a final contest arranged at the end of each course.

I have worked on various tasks including CNN applied to captcha recognition, LSTM applied to music genre recognition and parking lot occupancy estimation, opencv applied to image recognition and mouse control using gestures, sklearn applied to various datasets prediction, as well as practical implementation of a series of famous ML algorithms using only numpy.

#### C/C++ Related

I am also highly proficient in C/C++, thanks to the Operating System course I took. The assignments on this course included a large number of tasks related to kernel API integration and implementation of kernel algorithms. In addition to that, the algorithms and graph theory course I took was a competition-oriented course mainly taught using C++. Assignments and exams were conducted in the form of online judge coding tests, which allowed me to become highly skilled in applying algorithms and data structures.

#### Front end/Back end Related

In addition, I have also taken a course in Database Systems. During the course, I used a frontend template structure provided by the teaching assistant and implemented a web page for ordering and managing orders using a phpMyadmin database and a self-developed php backend. This gave me practical experience of integrating frontend and backend systems.

## Graduation Project

My research focus is on [NeRF](#)(2021), a neural network technique for reconstructing 3D scenes. Based on this context, I delve deeper into exploring various papers proposed for optimizing (1) training time, (2) extending this idea to other tasks, such as whether the scene to be reconstructed includes unbounded background, (3) real-time rendering, and (4) stylized rendering of scenes, etc. Finally, I integrate these findings and apply them to campus navigation.

### Skills

---

- Python , C/C++
- Basic PHP + MySQL + HTML
- PyTorch + Tensorflow (Keras)
- sklearn
- Basic Linux operations

### Language abilities

---

- Chinese — My mother tongue
- English — Advanced : Passed the high-intermediate level tests of GEPT and achieved a TOEIC score of 850.