

Jinxi Xiao

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EDUCATION

- **ShanghaiTech University** Shanghai, Mainland China
Bachelor of Computer Science and Technology; GPA: 3.76 / 4.00; Rank: 8 / 178 2021.9 - Present

SKILLS SUMMARY

- **Languages:** C, C++, Python, Shell scripting
- **Tools:** GIT, Matlab, ROS2, Docker

EXPERIENCE

- **Mobile Perception Lab** Shanghai, ShanghaiTech
Research advised by Prof. Laurent Kneip 2023.7 - Present
 - **Point Cloud Bias Removal:** This project aims to remove the bias from point cloud data with self-supervised deep learning techniques. And my responsibilities encompass the following (this project is still under investigation):
 - * Developed a plugin for game GTA-V to generates simulated point cloud data automatically. These clean simulation data with no errors are used for further analysis tasks. *Here* is the open-source GitHub repo.
 - * Contribute to the code framework. I have implemented some neural networks in PyTorch, including PointNet and MLPs.
 - * I have designed a more advanced loss function for the network, which makes full use of the eigenvalues of the covariance matrix of features in point cloud data. This new loss function aims to achieve a scale-irrelevant map consistency.
 - **Non-Rigid:** This is the current research direction and is under investigation.
- **Teaching Assistant for Linear Algebra I** Shanghai, ShanghaiTech
Supervised by Prof. Boqing Xue 2023.9 - 2024.1
 - **Contributions:** Marking homework, exam invigilation and holding discussion classes. And *here* are my notes(slides) for the discussion class.

ACADEMIC PROJECTS

- **Lunar Lander:** The course project for CS181(*Artificial Intelligence*) at ShanghaiTech, and I worked as the group leader.
 - * Made use of OpenAI Gym as the develop environment. Aimed to make the lunar lander agent learn to land successfully.
 - * Implemented deep Q-Learning, Bayesian Network and some other methods (e.g. offline MLP).
- **Human Age Estimation based on Facial Images:** This was the course project for CS182(*Introduction to Machine Learning*) at ShanghaiTech and I worked as the group leader.
 - * Aimed to estimate human ages based on UTKFace data set.
 - * Implemented KNN, SVM and ResNet as the trivial solutions. Further more, we came up with a *coarse-to-fine* technique to achieve a high accuracy result close to SOTA.
- **Monocular Depth Estimation:** The course project for CS172(*Computer Vision I*) at ShanghaiTech and I was the group leader. I came up with the method of combining *Optical Flow Module* with the *SOTA framework*. *Here* is our final report.

HONORS AND AWARDS

- Awarded the title of Outstanding Student at ShanghaiTech University (Academic Year 2022-2023).
- Awarded the title of Outstanding Student at ShanghaiTech University (Academic Year 2021-2022).
- Awarded *Third Prize* in the preliminary round of the 15th National College Student Mathematics Competition.

ACTIVITIES

- * Volunteering at the China Maritime Museum. (2022.10, 2023.10)
- * Participating in the TuSimple AI Day. (2023.7)
- * Volunteering at the Shanghai Marathon event. (2022.11)
- * Serving as the leader of the news group in the social practice at Liupanshui, Guizhou Province. (2022.8)