# Zhang Liyu

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## Personal Profile

An undergraduate student (currently third year) at Southern University of Science and Technology. Currently researching automatic driving trajectory predicting in data sets including L5kit and argoverse. Willing to do other exciting research in different filed.

## Education

**Southern University of Science and Technology (SUSTECH)** *Shenzhen, China*

Computer Science and Engineering *Sept 2020 - Current*

- **Courses taken :** C/C++ Programming, JAVA Programming, Data Structure, Computer Network, Principles of Computer Composition, Artificial Intelligence, Machine Learning, Statistical Learning

## University Projects

**Trajectory predicting based on LSTM and Meta-Learning pretrained model** *Shenzhen, China*

SUSTECH *Feb 2022 - Apr 2022*

- Analysing data from Microsoft Geolife GPS trajectory data set, and predict the user's position of next period like 3 second or longer.
- The basic method is LSTM and we grid the GPS point by the H3 package. We try to train Meta-Learning model in global data and train different models for specific user.

**Implement CNN by C++** *Shenzhen, China*

SUSTECH *Oct 2021 - Dec 2021*

- Implement the CNN forward spreading and back propagation by native CPP. Finally, the model should classify whether it's face.
- Implement the matrix multiply and caffe from scratch, compute the gradient by specific the formula.

**Trajectory predicting in Autonomous driving based on vecternet and game theory** *Shenzhen, China*

SUSTECH *July 2022 - Current*

- Using the data set argoverse, we want to combine vectornet with the game theory to promote the effect of predicting result in crossroads and on or off ramp.

**Other projects** *Shenzhen, China*

SUSTECH *Sep 2020 - Current*

- TCP game python server
- video server implement by flask
- C++ ZIP processing software(Archive and compress a single file according to standard of zip file format)
- RISC-V CPU(Implement a CPU that support RV32I instruction set which works on FPGA board)
- RISC-V 16k OS(Modify a toy RISC-V operating system to support pages of 16 kbytes to run on QEMU)

## Skills

**pytorch,tensorflow,mindspore** the essential framework for AI researchers

**Linux(Ubuntu)** the basic skill for computer students

**Latex(overleaf)** the basic skill for researchers

## Academic Performance and Awards

2022 **3.80/4.00**, GPA *Shenzhen, China*

2022 **co-author of a paper in 2022 ACM SIGSPATIAL Conference**, Personalized individual trajectory prediction via Meta-Learning *Shenzhen, China*

2021 **Third Prize**, SUSTech Programming Competition *Shenzhen, China*

2021 **Third Prize**, 2021 Outstanding Student Scholarship of Southern University of Science and Technology *Shenzhen, China*

## Languages

**Chinese** Native proficiency

**English** Basic proficiency