

## Fuyang ZHANG

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### EDUCATION

#### BeiHang University

B.CS. SHENYUAN Honors College, major in Computer Science

Beijing, China

Sept. 2015-present

- **Major GPA:** 3.79/4.0
- **Awards:** 1<sup>st</sup> Prize of BeiHang C Language Programming competition (1<sup>st</sup> of 300), 3<sup>rd</sup> Prize of Feng Ru Cup competition(top 5%), Best TA in RoboRAVE Workshop(taught the champion of the RoboRAVE Asia Open)
- **Major Courses:** Mathematical Analysis, Linear Algebra, Discrete mathematics, Probability Statistics, Principles of Computer Organization, C Language Programming, Java Language Programming, Data Structure, Algorithms, Data Mining, Compiler, Databases
- **Coursera:**
  - [Machine Learning \(Stanford University, certificate\)](#)
  - [Neural Networks and Deep Learning \(deeplearning.ai, certificate\)](#)
  - [Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization\(deeplearning.ai, certificate\)](#)
  - [Structuring Machine Learning Projects \(deeplearning.ai, certificate\)](#)
  - [C# Programing \(Peking University, certificate\)](#)
  - Data Processing Using Python (Nanjing University)

### RESEARCH EXPERIENCE

#### Accurate identification of vehicles using triplet loss and structural characteristics

Advisor: Jiwen Lu, Associate Professor, Department of Automation, Tsinghua University

Mar.2018-Present

Collaborator: Liangliang Ren, Phd, Tsinghua University

- Base on baseline to make a trial of innovation.
- Improve recognition with automotive specific structural features.
- Still working.

#### Multi-target Tracking Based on Sports Scene

Advisor: Di Huang, Associate Professor, Department of Computer Science & Engineering, Beihang University

Feb.2018-Present

- Compare the performance of different tracking algorithms, such as Correlation Filter, deep learning, etc
- Combining Struck and Deep Learning Methods to train model data.
- Still working.

#### Machine learning analysis of wifi information to accurately locate customer's position in mall

Advisor: Jingyuan Wang, Associate Professor, Department of Computer Science & Engineering, Beihang University

Sep.2017-Jan.2018

- Extracted features of different dimensions according to original data.
- Fed features to the xgboost model and evaluated it on Validation set.
- Embedded features into Low-dimensional space and used neural network method to fit training data.
- Used a voting model to integrate the xgboost and NN model.

### PROFESSIONAL EXPERIENCE

#### Beihang Data Engineering (Smart City Gov. Project) Lab

Software Developer Intern

Shenzhen, China

Jul.2017-Jan.2018

- Worked on a project to systematically improve the efficiency of the online meeting platform
- Decomposed the tasks, designed and built the interface and the process of the system, tested the system for robustness
- Built a monitor system to watch all devices working status (cpu utilization percentage, temperature etc)
- Coordinated with other team members to integrate the separately-coded components

**Teaching Assistant in RoboRAVE Workshop**

Beijing, China

- Taught students in high school how to turn their idea about robots into reality; helped them prepare for the RoboRAVE Asia Open; taught the group that won the first prize in the Asia Open
- Worked as the referee in 2016 RoboRAVE Asia Open. See in <https://roborave.org/>

**AWARDS AND HONORS**

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**Honorable Mention, Mathematical Contest In Modeling**

Apr. 2017

**Third Prize, the 26th “Feng Ru Cup” Competition of Academic and Technological Works**

May 2016

**Third Prize, the third “Hua Heng Cup” robot Challenge Competition**

Dec. 2015

- I used a multi-task intelligent car to win these two prizes. The car runs on two different modes: manual operation and automatic operation. It can avoid obstacles in front it and can handle simple situations on the road. The car has sensors such as ultrasonic modules, infrared modules, to take in the environmental conditions around the car. The car turns this data into feedback that determines the direction and speed of its next movement

**SKILLS AND OTHERS**

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**Language:** Chinese(native), English.**Computer:** C, C#, Java, python, tensorflow, Vim, git, Latex, Arduino**Interests:** Basketball, Billiards, Swimming, and Go