# YANG XU

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## EDUCATION

**Bachelor of Engineering in Automation** 2016 - 2021
Tsinghua University, Beijing, China.

- GPA : 3.75/4 (rank 31/170)
- Selected Courses: Calculus B(2) (4.0, top 5%), Linear Algebra(1) (4.0,top 5%), Computer Languages and Programming (4.0, top 5%), Data Structures (4.0, top 5%), Contemporary Electronic System Design (4.0, top 5%)
- Current Cources: Theory of Automatic Control, Applied Stochastic Processes, Numerical Analysis and Algorithms, Computer Networks and Applications, Foundation of Artificial Intelligence

**Minor in Statistical Science** 2018 - 2021
Tsinghua University, Beijing, China.

- Selected Course: Elementary Probability Theory (4.0, top 5%), Statistical Inference (4.0,top 5%)
- Current Cources: Statistical Computing

## RESEARCH EXPERIENCE

**Design of Attack Strategy Based on Self-learning** December 2018 ∼ NaN
Mentor: Yilin Mo, Associate Professor in Department of Automation, Tsinghua University

- Foucus on looking for an attack strategy to destabilise a system knowing as less model knowledge as possible.
- Currently use iterative learning control to estimate the Jacobian matrix between the output (measurements) and the input (control signals).
- The goal is to destabilise a system without triggering an alarm.

## PROJECTS AND COMMUNITY ACTIVITIES

**P2P Instant Messaging Software** November 2019

- A project in the course 'Computer Networks and Applications'.
- A software accomplished with C# and Internet protocols like TCP and UDP, which allows users to communicate with each other by texting, speeches and videos.

**'Rolling Block' Game** October 2019

- A project in the course 'Foundation of Artificial Intelligence'.
- A game accomplished with Unity, which allows a player to roll a block trying to arrive at a certain position and also provides a few intelligent algorithms to find proper routes automatically, like DFS, BFS and $A^*$.

**Intelligent Logistics Sorting System** July 2019

- An AGV equipped with a robotic arm, which is used to sort and transport goods.

**Coin Operated Cell Phone Charging Machine** October 2018

- A project in the course 'Digital Electronics' accomplished on FPGA using Verilog.

**Tsinghua International Summer School** July 2018

- Design and create drones along with French students.

## SELECTED AWARDS

ATOM member (a project focusing on cultivating research talents). (10/170) December 2019
Second Prize in Contemporary Undergraduate Mathematical Contest in Modeling (CUMCM). November 2019
Academic Excellence Award. October 2018
Academic Excellence Award. October 2017

## ADDITIONAL INFORMATION

Skills

- Programming languages: proficient in C, C++, C#, R, Python, MATLAB, Verilog, qualified in Qt, Unity
- Fluent in English (TOEFL 97)