# XIAOZHENG (JUDY) XU

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WEBSITE: HTTPS://XIAOZHENGXU.GITHUB.IO

## EDUCATION

OLIN COLLEGE OF ENGINEERING, Needham, MA                                        May 2018
**Robotics Engineering, GPA 3.81/4**
**Relevant courses:** Computational Robotics, Thermodynamics, Partial Differential Equations, Controls, Fundamentals of Robotics, Data structures, Mechanics of Solids and Structures, Principles of Engineering

## EXPERIENCE

**Summer Research Position in Astronomy,** Toronto, ON                                        May-Aug 2016
Under the direction of **Prof. Ue-Li Pen** at **Canadian Institute for Theoretical Astrophysics:**

- Researched about the emission mechanisms of the crab pulsar using its nebula as a galactic telescope.
- Used Python and Linux to process signals at different radio telescopes around the world.
- Found that the crab's enigmatic pulses might be emitted from regions separated more than 500km in the pulsar's magnetosphere.

**Modelling and Simulation course Assistant,** Needham, MA                                        Fall 2015

- Helped students modelling with Matlab by answering questions and guiding them in projects and class activities.

**Localization Intern, Dassault Systems,** Waltham, MA                                        Summer 2015

- Worked on the user interface of Solidworks in 13 different languages.
- Solved customer and QA generated service pack reports by investigating the bugs in the software. Wrote corresponding Fix-requests to translation vendor.

## PROJECTS

**Fundamental of Robotics:**                                        Fall 2016

- Design, fabricate and code a robotic car to race around campus using LIDAR, camera and ROS.

**Research in autonomous fixed wing air vehicles**                                        Fall 2016

- Design and fly test fixed wing airplanes to do loiter maneuvers and autonomous landing.
- Use these planes to take an aerial map of local area.

**Software Design**                                        Spring 2016

- Designed and implemented Interactive Calculus using python and open CV. http://xiaozhengxu.github.io/Interactive-Calculus/index

**User Oriented Collaborative Design:**                                        Spring 2016

- Interviewed and had co-design sessions with minimalists (people who live with less intentionally).
- Designed a minimalist Grocery Store that acts as a community center for minimalists to meet and reach out to non-minimalists.

**Principles of Engineering**                                        Fall 2015

- Designed, prototyped and fabricated Azimuth, a table top robot that fetches salt and pepper. http://poejectazimuth.weebly.com

## SKILLS

- **Programming and software:** Python, java, Matlab, Linux, Arduino, C++, ROS
- **CAD and Rapid Prototyping:** Solidworks CSWA-certified, 3D printing
- **Languages:** English(fluent), Mandarin(fluent), French (advanced)
- **Machine Shop:** trained on mill, lathe, drills, saws and sanders