

XIAOZHENG (JUDY) XU

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WEBSITE: [HTTPS://XIAOZHENGXU.GITHUB.IO](https://XIAOZHENGXU.GITHUB.IO)

EDUCATION

OLIN COLLEGE OF ENGINEERING, Needham, MA

May 2018

Robotics Engineering, GPA 3.83/4

Relevant courses: Computer Architecture, Computational Robotics, Data structures, Software Design, Controls, Dynamics, Fluid Dynamics, Mechanical Prototyping, Quantum Physics, Partial Differential Equations

EXPERIENCE

Software Engineering Intern at Google, Mountain View, CA

June-Aug 2017

With **Daydream (Google VR)**:

- Worked on creating a html report for computing metrics and visualizing results
- Collected and processed data from real time measurement system
- Learned better coding practices through testing and code reviews

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.

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

Senior Capstone in Engineering

Fall 2017

- Research, design and implement a new type of low-weight actuator for aerospace applications.

Computer Architecture

Fall 2017

- Design and implement a computer CPU in verilog.

IARC competition

Fall 2017

- Research and design an autonomous drone to "shepherd" roomba robots in random motion, with extensive machine learning and algorithm implementations

Computational Robotics

Spring 2017

- Implemented a working Extended Kalman Filter with Neatos Odometry and IMU data.

Affordable Design for Entrepreneurship

Spring 2017

- Improve design, production and cost of cassava-processing machines for women in rural Ghana.

Fundamental of Robotics

Fall 2016

- Designed and coded an autonomous Bravobot to race around campus using LIDAR, camera and ROS.

Controls

Fall 2016

- Built and analyzed an inverted pendulum and magnetic levitation using circuits without sensors.

Software Design

Spring 2016

- Designed and implemented an Interactive Calculus app using python and open CV.

Principles of Engineering

Fall 2015

- Designed, prototyped and fabricated Azimuth, a table top robot that fetches salt and pepper.

SKILLS

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