

# Adith J Bloor

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## EDUCATION

### WASHINGTON UNIVERSITY

#### MENG IN ROBOTICS

Grad. Dec 2017 | St. Louis, MO

Cum. GPA: 3.7/4.0

### PURDUE UNIVERSITY

#### BS IN MECHANICAL ENGINEERING

Grad. May 2016 | West Lafayette, IN

Dean's List | Semester Honors

### JIAO TONG UNIVERSITY

Spring 2015 | Shanghai, China

Engineering Term Abroad | Travel Chair

## LINKS

Github:// [ajbloor](#)

LinkedIn:// [/in/adith-jb](#)

## SKILLS

### PROGRAMMING

Proficient:

Python • MATLAB • Arduino

LaTeX • Linux

Familiar:

ROS • Axepad • C • C++

### CAD AND SIMULATION

Proficient:

Onshape • LabVIEW • Simulink • CATIA

Fusion360 • Solidworks • Blender

Familiar:

Inventor • Creo • Gazebo

### LANGUAGES

Proficient:

English • Hindi • Kannada • Tulu

Familiar:

Mandarin • Spanish

## COURSEWORK

### GRADUATE

Introduction to Artificial Intelligence

Introduction to Machine Learning

Random Processes and Kalman Filtering

Robotics Dynamics and Control | Lab

Wireless Sensor Networks

### UNDERGRADUATE

Automatic Control Systems

Bio Inspired Robotics

Human Motion Kinetics

Machine Design

Robotics Seminar

## RESEARCH AND EXPERIENCE

### WASHINGTON UNIVERSITY PEDS LAB | GRADUATE RESEARCHER

Aug 2016 – Present | St. Louis, MO

- Created PiCar: a lab scale, open-source, autonomous vehicle platform for economical, flexible and scale-able driver-less car research using Raspberry Pi.
- Designed, 3D printed and reiterated the vehicle CAD model from ground up, including PiCar's Ackermann steering mechanism, using standard Design for Assembly practices.
- Assisted in PCB design, inventory, assembly, maintaining bill of materials spreadsheets, and implementing PiCar's optical flow navigation system.
- Simulating the platform using ROS and Gazebo for improving control algorithms and testing computer vision algorithms.

### PURDUE M2M LAB | UNDERGRAD RESEARCHER

Jun 2014 – Dec 2014 | West Lafayette, IN

- Worked with large team to develop HARMS (Humans, Agents, Robots, Machines, Sensors) protocol for integrating UGVs and humanoid robots to aid in fire rescue scenarios, and published a paper for ICARA 2015.
- Programmed and calibrated Darwin-OP humanoid robots' locomotion gaits to allow navigation to the fire source and to enable fire suppression.
- Designed and 3D printed parts of Darwin-OP frame to decrease chassis cost.

### PACKT PUBLISHING | AUTHOR OF 'ARDUINO BY EXAMPLE'

Jan 2015 – Sep 2015 | ISBN: 178528908X

- Wrote project based-book on Arduino micro-controller on home automation, smart security, robotics, speech recognition and Internet of Things.
- Created an economical speech controlled quadropod robot project made of ice-cream sticks capable of walking, using BitVoicer speech-to-text interface.
- Collaborated with technical reviewers, editors, and marketing teams to meet quality requirements and strict deadlines.

### WASHINGTON UNIVERSITY CAPITAL PROJECTS | TECH SUPPORT

Sep 2017 – Dec 2017 | St. Louis, MO

- Assisted IT department to migrate computers of administrators and medical staff to compatible operating systems in lieu of EPIC software upgrade.
- Used customer service and trouble shooting skills to fix end user issues on-site, and submitted unresolved issues to management and engineering teams.
- Maintained and updated spreadsheet for users, devices and printers for automated driver installations and debugging.

### YOJAKA PVT. LTD. | MECHANICAL ENGINEERING INTERN

May 2014 – Jun 2014 | Mangalore, India

- Assisted in repairing engines, and inspected tug boats and dredgers.
- Learned about hydraulic systems used in dredgers for winch, spud and ladder control mechanisms.
- Developed communication skills to relay information and instructions between engineers and management.

## AWARDS

2017	Finalist	PiCar   Silk Road Robotics Innovation Competition   Xi'an, China
2015	Top 5	Project GreenLight   BoilerMake Hackathon   Purdue University
2014	First	Speech Quadropod   Microcontrollers Contest   Instructables

## PROJECTS

2018	Humanoid CAD Model	Personal   CAD   Simulation   Rigging   Motion Capture Animation   Blender
2017	OBD-II Vehicle Diagnostics	Course   Vehicle CAN Interface   Amazon AWS   Real-time Data   Raspberry Pi
2017	Three Link Planar Robot	Course   Simulation   Robot Kinematics & Dynamics   Physics Engine   MathWorks
2016	Martian Solar Panel Cleaner	Course   Green Energy   Shape Memory Alloy   3D Printing   Prototype   Mechanical
2015	Project GreenLight	Hackathon   Social Engineering   Circuit Design   Buttons & LEDs UI   Arduino
2014	Speech Controlled Quadropod	Personal   Legged Servo Control   Speech Recognition   Bluetooth   Arduino
2011	Wall-E Prototype	Personal   Obstacle Avoidance   Wheeled Robot   Autonomous   Picaxe

## ORGANIZATIONS

2016	Volunteer	3D Printing Lab   Helped students create CAD models and 3D print parts   Purdue University
2013	Volunteer	Winterization   Readied homes of senior citizens for winter   Lafayette, IN
2013	Member	EPICS   Built Mars Curiosity replica and terrain enclosure for local museum   Purdue University
2012	Mentor	FIRST   Helped FRC Team 461 build a basketball throwing robot   Lafayette, IN

## INTERESTS

- Chess | Won international tournaments held at Greece, Georgia, India and Singapore
- Travel | Explored China, Georgia, Greece, Hong Kong, India, Indonesia, Macao, Malaysia, Thailand, Turkey, Singapore, Sri Lanka, USA, and Vienna

## PUBLICATIONS

- Bloor A.J., Wagoner A. and Matson E.T., Humanoid Robots Rescuing Humans and Extinguishing Fires for Cooperative Fire Security System using HARMS. International Conference on Automation, Robotics and Applications (ICARA), 2015. Reference: <http://ieeexplore.ieee.org/abstract/document/7081183/>
- Bloor A.J. (2015) Arduino by Example. PACKT Publishing. Reference: <https://www.packtpub.com/hardware-and-creative/arduino-example>