

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 • Linux

LaTeX • Sphinx • HTML5 • Java

Familiar:

ROS • Keras • C • C++ • GCP • AWS

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

RESEARCH AND EXPERIENCE

OPCODER AI | SOFTWARE DEVELOPER

March 2018 – Current | St. Louis, MO

- Utilized Natural Language Processing (NLP) algorithms to improve hospital billing processing speed by ten times
- Developed front-end UI to serve as a supplement to hospital human coders and an auditing tool for hospital administrators
- Secured funding of USD 7,500 by placing 2nd at the Discovery Competition at Washington University in St. Louis.

WASHINGTON UNIVERSITY PEDS LAB | GRADUATE RESEARCHER

Aug 2016 – Current | 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.
- Team lead of 6 undergraduate researchers to use PiCar platform for studying and optimizing power management with reinforcement learning
- Mechanical design in-charge: designed and 3D printed chassis parts to accommodate sensors and electronics with DFMA standards
- Primary maintainer of PiCar GitHub repository and documentation via ReadTheDocs (Sphinx) service to make it more reproducible
- Set up Picar network architecture between Raspberry Pi's and university network to facilitate convenient access and allow easier data transfer

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.

YOJAKA PVT. LTD. | MECHANICAL ENGINEERING INTERN

May 2014 – Jun 2014 | Mangalore, India

- Assisted in repairing engines, and learned about hydraulics systems in dredgers.
- Served as communication liaison between management and engineering teams.

AWARDS

2018	Second	OpCoder AI Discovery Competition Washington University NLP in Healthcare
2017	Finalist	PiCar Silk Road Robotics Innovation Competition Xi'an, China Bio-inspired Robotics
2015	Top 5	Project GreenLight BoilerMake Hackathon Purdue University Social Engineering
2014	First	Speech Controlled Quadropod Micro-controllers Contest Instructables Robotics

PROJECTS

2018	Aircrash Visualization	Kaggle Big Data Data Visualization Natural Language Processing
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>