

# AARAV BALSU

## Education

---

**University of Illinois at Urbana-Champaign** – Class of 2017, BSc. Aerospace Engineering, Minors in History and Political Science  
**American International School of Abu Dhabi** – Class of 2013, International Baccalaureate Program

## Skills

---

### CAD

Siemens NX 9.1, Creo, SolidWorks

### Computer Programming

Python, HTML 5, CSS, C++, MATLAB, Simulink, Mathematica, ROS

### General Computer Skills

Linux, Mac OS X, Microsoft Windows, LoggerPro, NX Thermal, Microsoft Office (Word, Excel, PowerPoint, etc.), Able to learn new software skills extremely quickly  
**Networking**  
CCNA, CWNA (In Progress), Cisco  
Cybersecurity Scholar (In Progress)

### Relevant Coursework

Aerospace Controls Systems  
Orbital Mechanics, Optical Remote Sensing, UAV Nav&Control  
**Communication**  
Fluent in Spanish, Arabic, Hindi, Telugu

## Technical Experience

---

### PROJECT ASSISTANT – University of Illinois - Champaign, Illinois - May 2015 – September 2015

- Assisted in the Lower Atmospheric Ionospheric Coupling Experiment (LAICE), a CubeSat project in collaboration with VirginiaTech.
- Gained valuable experience in understanding space based thermal simulation, signals processing, radio operation, and vacuum chamber optimization for the project.
- Led the team in charge of creating the electrical connections between the various subsystems of the nanosatellite.

### PROJECT ASSISTANT – University of Illinois - Champaign, Illinois – September 2014 – January 2015

- Worked in close collaboration with team members to develop a cost-efficient propulsion system for a predicted NASA mission to Mars as part of the Revolutionary Aerospace Systems Concepts Academic Linkage (RASC-AL) program.
- Gained technical insights into structural engineering, material design, deep space radiation, and extended interplanetary travel.
- Personal focus on the structure and material components of the transfer vehicle, allowing for a greater appreciation for and understanding of composite materials such as Nextel, Vectran, Kevlar, Combitherm, etc.

### CO-FOUNDER – Dreadnought Robotics, University of Illinois – Champaign, Illinois – January 2016 - Present

- Building an aerial fixed-wing UAS from scratch, named SkyButler, to deliver a safer, cheaper, more hackable aerial robotic experience to consumers.
- Participating in COZAD entrepreneurship competition against other teams to secure a \$150,000 grand prize
- Leading a team of six other undergraduate students from various engineering disciplines to create SkyButler, learning various skills in the process related to controls, structural integrity, material science, and aerodynamics.

## Extracurricular Experience

---

### TEAM MEMBER – Engineering Ambassadors – Champaign, Illinois – April 2014

- Gained experience with effective technical communication and public speaking.
- Planned a campus speaking competition where students publicly presented engineering solutions to global challenges.

### VOLUNTEER – Habitat for Humanity – Kuching, Malaysian Borneo – February 2013

- Worked as part of an all-volunteer team in Kuching, Malaysian Borneo that helped build a safe and well-constructed home for a family.
- Led a team that focused on the structural integrity of the housing structure.

### ANIMAL CARE VOLUNTEER – Champaign County Humane Society - Champaign, Illinois – June 2015 - Present