

David Boles

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University student passionate about designing complex systems
across engineering disciplines.

Education

Brown University—3.85 GPA

September 2018–Present

- Topics in Collaborative Robotics (*in progress*)
- Sensors and Actuators for Real Systems (*in progress*)
- Introduction to Robotics—PID, Kalman Filters, and SLAM
- Introduction to Software Engineering
- Digital Electronics Systems Design
- Electrical Circuits and Signals
- Dynamics and Vibrations
- Applied Ordinary Differential Equations

Design Tech High School and Community Colleges—4.0 GPA

August 2014–June 2018

- Design Lab 1-8—Stanford's "Design Thinking" Methodology
- Linux Administration
- Mobile Web App Development
- Linear Algebra and Calculus I-III

Experience

Brown Space Engineering—Technical Lead

September 2018–Present

- Oversees the from-scratch design, fabrication, and testing of a low-cost satellite with motorized arm, camera, and S-band downlink by a 70-student undergraduate club.
- Experiments with development guardrails for FreeRTOS-based firmware.

Styra—Software Development Intern

June 2019–August 2019

- Created a configurable, markdown-compatible system for embedding live, interdependent blocks of code into public-facing documentation.
- Worked with engineers and designers to implement features in both the product frontend and backend.

Oracle Education Foundation—Intern

March 2016–June 2018

- Guided groups of students in designing human-centered solutions using electronics and programming.
- Developed a new Internet-of-Things course in collaboration with Program Managers.

B.R.E.A.D. FRC Robotics Team—Robot Division Lead

September 2015–June 2018

- Managed and coordinated software, electrical, and mechanical groups, composed of over 40 students and several mentors, to build competition-ready, 80+ pound robots.
- Developed a modular robot control architecture written in Java.

Skills

User-Centered Design

Software Engineering

- Javascript, React
- HTML, CSS
- Go
- Java
- C
- Python, NumPy, OpenCV
- MATLAB
- Racket, Plait

Mechanical Engineering

- Solidworks
- Fusion 360

Rapid Prototyping

- 3D Printers
- Laser Cutters
- CNC Mills and Routers

Networking

- Cable Installation
- Hardware Configuration

Awards

Rookie All-Star Award

Awarded to B.R.E.A.D. at the Silicon Valley FIRST Robotics Competition Regional, 2016

Languages

French—9 Years

Spanish—4 Years

Other Interests

Ceramics

Cooking

Knitting

Philosophy