



# Russel Bradley

Mechanical Engineer | Manufacturing |  
Computer-Aided Design | Additive Manufacturing |  
Industry 4.0

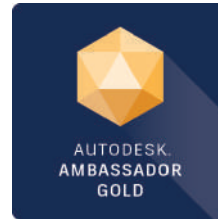
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# Certifications



# Internships



**Structo**

**Automation Engineer  
Intern**

Delivering world's  
first fully automated  
robotic 3D printing  
production line



**Fusion Catalyst  
Intern**

Fusion 360 Campus  
Evangelist

**LEXIKAT**

**Data Analytics Algorithm  
Intern**

Designed a text data  
analysis algorithm for  
Bahasa Indonesia in  
Python and C++



**SolidWorks Student Leader**

SolidWorks Campus Evangelist

Certifications | Workshops

# Teaching

ME2102: Engineering Innovation and Modelling (NUS AY20/21-S2)

ME2162: Manufacturing Processes (NUS AY20/21-S1)

TME 2162: Manufacturing Processes (NUS AY20/21-S1)

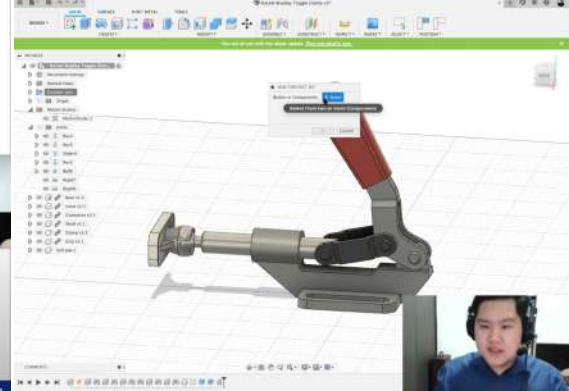
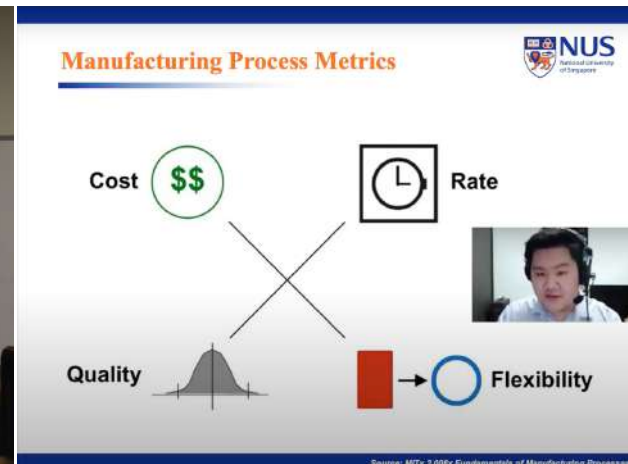
EG2301: Case Studies in Innovation (NUS AY20/21-S1)

EG1311: Design and Make (NUS AY19/20-S1)

EG2301: Case Studies in Engineering (NUS AY19/20-S1)

CS1010E: Programming Methodology I (NUS AY18/19-S2)

Other Various Workshops on CAD, 3D Printing and Manufacturing



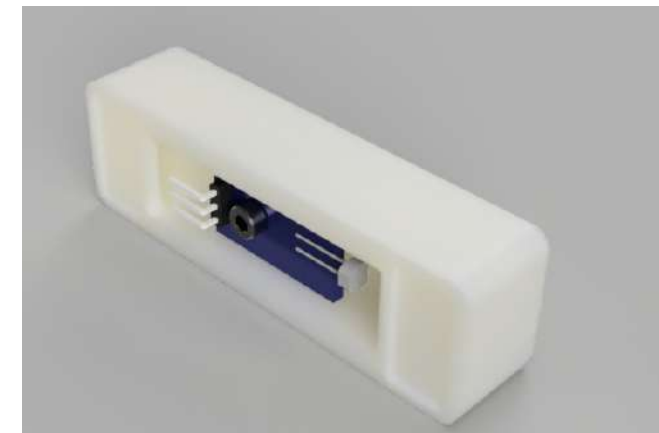
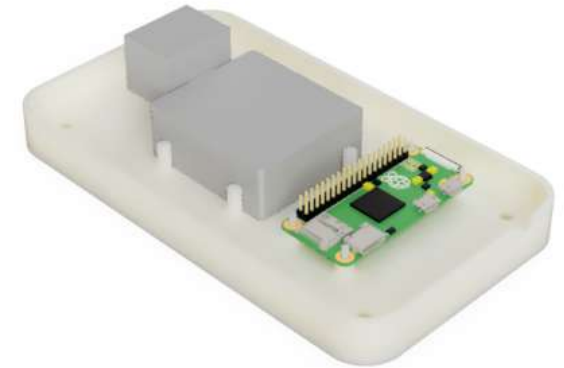


# Laundry Bot

*Role: Lead Mechanical Designer and Project Supervisor*

- Project on automated laundry notification system implemented on one of National University of Singapore's student residences.
- The system allows residents to check on the status of the washing machines, so they would not need to go back and forth the laundry rooms to check on the machine availability

GitHub repository:  
<https://github.com/RC4-LaundryBot/nuscollegelaundrybot>

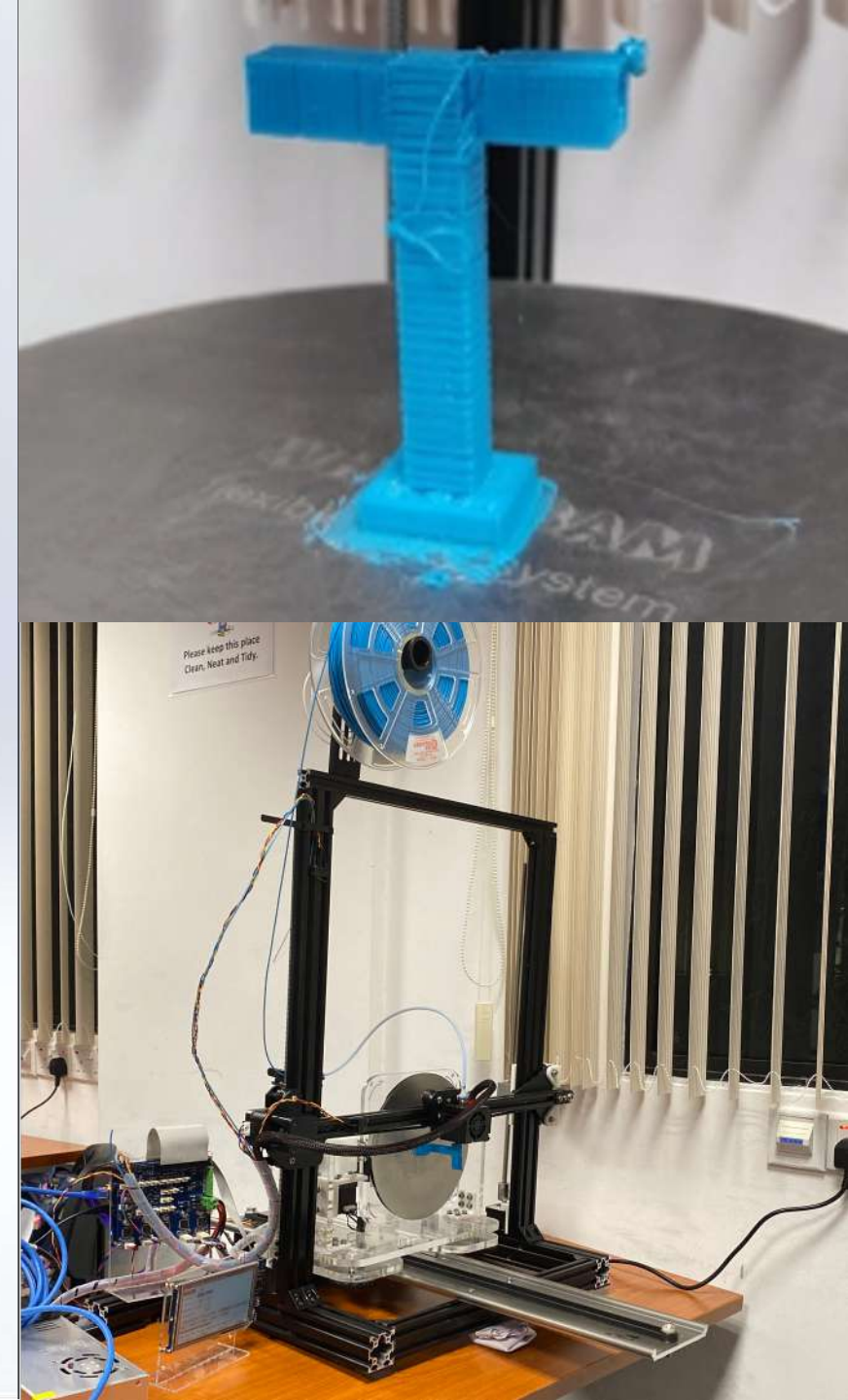


# 5 Axis FDM 3D Printer

*Role: Project Lead and Mechanical Designer*

We aim to remove the need for support structures in FDM 3D printing by enabling part reorientation in FDM 3D Printing. In addition to that, it is possible to eliminate anisotropy of the part.

Video Link: <https://youtu.be/syLM8uPM0SI>

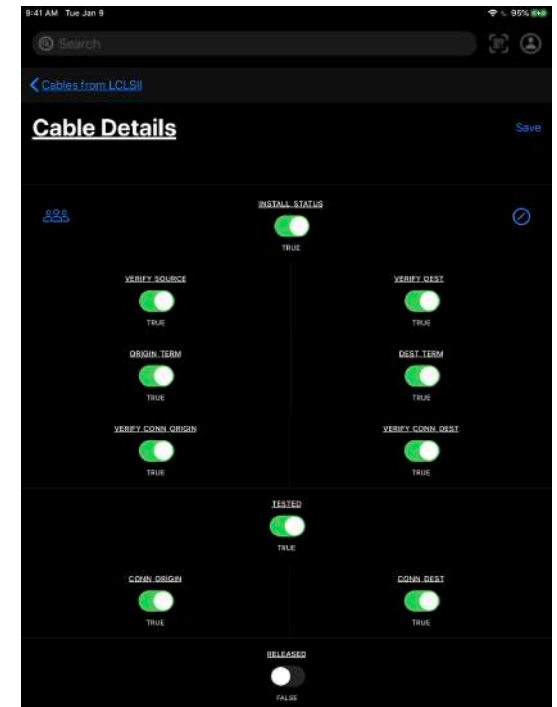
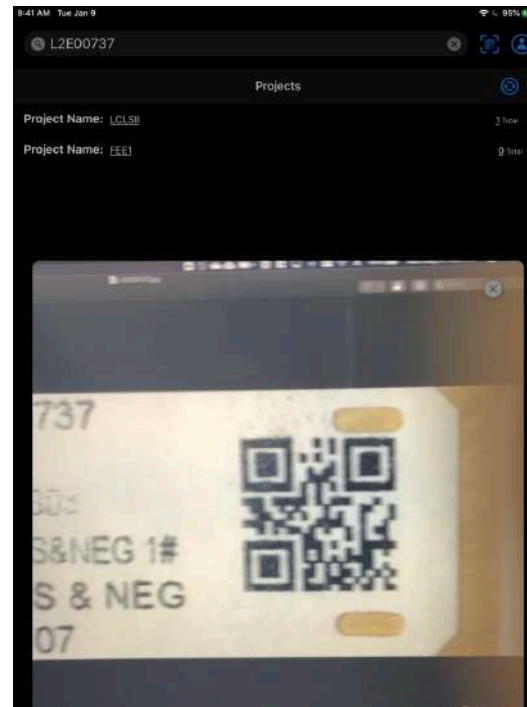
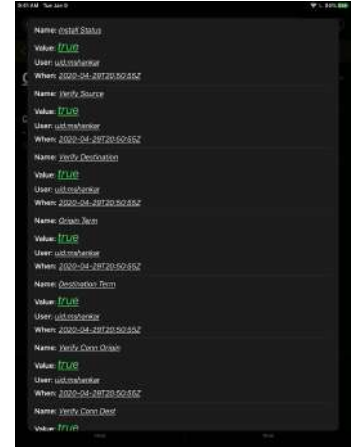
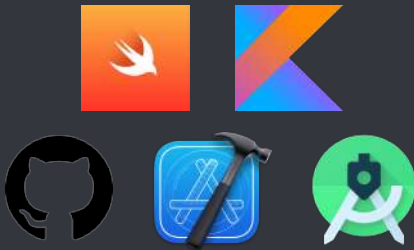


# SLAC

*Role: Technical Documentation and Software Engineer*

- Built an iOS and Android mobile application to help technicians and engineers to track and manage their cable connections in SLAC, the longest linear particle accelerator in the world. Our app features a QR code scanner and deferred syncing.
- Each project involves more 10 000 cables and there are more than 10 projects happening at the same time. Our algorithm has improved data syncing time by **10 times faster** than the previous application.

Tech  
Stack







# Saxophone Manufacturing Project

## Prototyping the First Saxophone in Singapore

- Combining components from the best suppliers and manufacturers at over 10 countries worldwide
- Our proprietary design, tooling and processes helps to ensure the highest quality







# Saxophone Manufacturing Highlight: The Machine Shop

Featuring products made in-house at our  
machine shop in Indonesia





## Saxophone Manufacturing Highlight: Handcrafted Saxophone Necks

- Hand Hammered Saxophone neck
- Lead-free processes





## Saxophone Manufacturing Highlight: Bell to Body Brace

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**First Metal Additive Manufacturing  
part for commercial use in the  
Saxophone**

The design allows for a stronger bell to  
body joint such that no adhesives is  
needed in the body to bow joint



The background image shows a workshop space. On the left is a white metal shelving unit with blue and green storage bins. In the center is a wooden workbench with a drone on it. To the right is a white sign with text about the space. The floor is concrete.

# RC4Space: Garage

*Project Director / Founder (2018),  
Advisor (2019 –present)*

- Spearheaded the first student-led makerspace initiative in the National University of Singapore.
- A space where students can work on their personal and academic projects.
- We provide 3D Printers, workstations, hand tools, power tools and supplies to support student projects.

# NUANSA 2019: Lukisan Jati

*Producer (Project Director)*

- Directed ideas, set objectives, and led the executions of a musical production valued at over SGD 50,000 with a team of 112 members

Website: <https://www.nuansacp.com>



*Lukisan Jati*  
NUANSA production



# Featured: NUS Student Life Ambassador

DIVERSITY & INCLUSION

STUDENT LEADERS

## **Juggle between CCAs and Studies – Is this possible in NUS?**



<http://nus.edu.sg/osa/stories/details/Index/juggle-between-ccas-and-studies>





Conference  
Session  
@  
3D Experience  
World 2021