

# Russel Bradley

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Current Location: Singapore | Home Country: Indonesia

## Personal Profile Statement

I am a final year Mechanical Engineering undergraduate at the National University of Singapore aspiring to deepen my understanding and gain insights in the design and manufacturing industry, with a particular interest in design and manufacturing as tools to make the world a better place. I am particularly interested in the fields of Additive Manufacturing, Computer-Aided Design, Operations & Supply Chain Management and Industry 4.0.

## Education

**National University of Singapore, Singapore (4.47/5.00)** **Aug 2017 – Jul 2021**

- Bachelor of Engineering (Honours), Mechanical Engineering on track for Second Upper Honours
- Second Major in Innovation & Design, Minor in Computer Science
- Studied topics on Manufacturing Engineering, DfMA, CAD & CAM, tool design and manufacturing automation
- ASEAN Undergraduate Scholarship and AY2018/2019 Semester 1 Dean's List

**University of California Merced, United States of America (4.0/4.0)** **Jan 2020 – May 2020**

- Non-Graduating, Student Exchange Program in Computer Science and Engineering
- Completed courses on Software Engineering, Computer Networks, Algorithms and CAD

**Bina Bangsa School Malang, Indonesia (4A\*)** **Aug 2015 – May 2017**

- High School, Accelerated Program, Cambridge A Level Examinations

## Professional Certificate

**Additive Manufacturing for Innovative Design and Production**

- MIT xPRO (Massachusetts Institute of Technology), September 2020 – January 2021

## Teaching Experience

<b>ME2102: Engineering Innovation and Modelling, National University of Singapore</b>	<b>Spring 2021</b>
Teaching Assistant   324 students   Teaching Evaluation Pending	
<b>ME2161: Manufacturing Processes, National University of Singapore</b>	<b>Fall 2020</b>
Teaching Assistant   375 students   Teaching Evaluation 4.4/5.0	
<b>TME2162: Manufacturing Processes, National University of Singapore</b>	<b>Fall 2020</b>
Teaching Assistant   52 students   Teaching Evaluation 4.4/5.0	
<b>EG2301: Case Studies in Innovation, National University of Singapore via Autodesk</b>	<b>Fall 2020</b>
CAD Instructor (contract)   120 Students	
<b>EG2301: Case Studies in Engineering, National University of Singapore via Autodesk</b>	<b>Fall 2019</b>
CAD Instructor (contract)   102 Students	
<b>EG1311: Design and Make, National University of Singapore</b>	<b>Fall 2019</b>
Lab Tutor   60 Students   Teaching Evaluation 4.5 / 5.0	
<b>CS1010E: Programming Methodology I, National University of Singapore</b>	<b>Spring 2019</b>
Teaching Assistant   14 Students   Teaching Evaluation 4.1 / 5.0	

## Internship Experience

<b>SOLIDWORKS Student Leader Intern at Dassault Systèmes, USA (Remote)</b>	<b>Oct 2020 – Present</b>
<ul style="list-style-type: none"><li>• Dassault Systèmes is a multinational company that develops CAD software such as SOLIDWORKS and CATIA</li><li>• Trained over 170 students on Computer Aided Design in Solidworks by conducting workshops &amp; webinars</li><li>• Certified over 125 students on Solidworks at the Associate and Professional Level</li></ul>	
<b>Algorithm Intern at Lexikat (Vox Dei Pte Ltd), Singapore</b>	<b>Jun 2020 – Aug 2020</b>
<ul style="list-style-type: none"><li>• Lexikat is a text analytics software that helps to capture topics and visualize text data</li><li>• Designed &amp; improved algorithms to process millions of pages of Bahasa Indonesia text data in Python &amp; C++</li><li>• Built the initial text analytics prototype to expand to the Indonesian market</li></ul>	
<b>Autodesk Fusion Catalyst Intern at Autodesk Asia Pte Ltd, Singapore</b>	<b>Jan 2019 – Dec 2019</b>
<ul style="list-style-type: none"><li>• Autodesk is a multinational company that develops CAD software for manufacturing, construction and media</li><li>• Promoted Autodesk Fusion 360 (cloud-based CAD, CAM &amp; CAE software) to NUS students and professors</li><li>• Conducted workshops on CAD and its applications using Autodesk Fusion 360 to a total of 500 students</li><li>• Successfully integrated Fusion 360 into 2 NUS modules, increasing outreach to an additional 700 students</li></ul>	
<b>Automation Engineering Intern at Structo Pte Ltd, Singapore</b>	<b>May 2019 - Aug 2019</b>
<ul style="list-style-type: none"><li>• Structo is a digital dentistry company that manufactures high throughput resin-based 3D printing solutions</li><li>• Conducted quality and reliability testing, FMEA, and DfX analysis of Mask Stereolithography 3D Printers</li><li>• Designed and manufactured parts and subassemblies for automation systems using Computer Aided Design</li><li>• Delivering world's first fully automated production line capable of printing thousands of unique products per day</li></ul>	

## Conference Presentations

Bradley, R. (2021, February). Designing Augmented Reality Models for the Digital Classroom. Conference session presented at 3D Experience World 2021, a Dassault Systèmes annual conference, Nashville, Tennessee, United States of America (Online).

## Organisational and Committee Experience

<b>NUANSA Cultural Productions, Producer (Project Director)</b>	<b>Jan 2019 – Dec 2019</b>
<ul style="list-style-type: none"><li>• Planned and managed an Indonesian cultural production worth over SGD 50 000</li><li>• Headed team of 112 people from different departments from external relations, artistic and production</li><li>• Improved cash flow by significantly reducing production costs by 60%</li></ul>	
<b>NUS Residential College 4, RC4SPACE, Vice President</b>	<b>Aug 2018 – Aug 2019</b>
<ul style="list-style-type: none"><li>• Spearheaded a student-led makerspace initiative</li><li>• Organized weekly hands-on workshops on technology (Arduino, Raspberry Pi, Python programming, Telegram bot)</li><li>• Initiated a project on an automated laundry notification system used by more than 600 people</li><li>• Developed e-learning and course material on 3D Printing and CAD</li></ul>	
<b>PINUS (NUS Indonesian Students Association), Finance Director</b>	<b>May 2020 – Present</b>
<b>NUS Residential College 4, RC4 Music Expression, Treasurer</b>	<b>Aug 2018 – May 2019</b>
<b>Bina Bangsa School Student Council, President</b>	<b>Aug 2015 – May 2016</b>

## Certifications

- Certified SolidWorks Professional – Mechanical Design
- Certified SolidWorks Professional Advanced – Drawing Tools
- Certified SolidWorks Associate – Mechanical Design
- Certified SolidWorks Associate – Additive Manufacturing
- 3D Experience Collaborative Business Explorer
- Autodesk Certified Professional – Design for Manufacturing
- Autodesk Certified Associate – CAD for Mechanical Design
- Autodesk Certified User – Fusion 360
- Siemens Solid Edge 2019 Professional
- Siemens Solid Edge 2019 Associate II
- Siemens Solid Edge 2019 Associate I
- Arduino Fundamentals

## Professional Development (MOOCs)

- Fundamentals of Manufacturing Processes (MITx on edX)
- Manufacturing Process Control I (MITx on edX)
- Manufacturing Systems I (MITx on edX)
- Supply Chains in Manufacturing: Capacity Planning (MITx on edX)

## Awards and Honours

- ASEAN Undergraduate Scholarship, National University of Singapore
- Dean's List AY1819 Semester 1, National University of Singapore Faculty of Engineering
- Top in The World – Cambridge AS Level Mathematics, November 2016 Session
- Valedictorian, Bina Bangsa School Malang

## Skills

- **Languages:** Native Bahasa Indonesia, Fluent in written and spoken English, Limited working proficiency in Mandarin
- **Business Skills:** Project Management, Negotiation, Corporate Relations
- **Productivity:** Microsoft Word, Microsoft Excel, Microsoft PowerPoint, Google Workspace (formerly G Suite)
- **Programming Languages:** C, C++, Java, Python, HTML, CSS, JavaScript, nesC (TinyOS), Matlab
- **CAD/CAM/CAE:** Solidworks, Autodesk Fusion 360, Siemens Solid Edge, PTC Onshape, Ansys
- **Hands-on:** Manual Lathe and Milling, 3D Printing, Laser cutting, CNC Machining
- **Others:** Teamwork, Collaborations, Teaching, Public Speaking, Design Thinking, Systems Thinking

## References

### Prof. Dr. SEAH Kar Heng

Professor

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### Dr. WOON Keng Soon

Lecturer

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