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Personal Statement

About Me
Generating innovative ideas has always been my forte. Serving the community has also always been my passion. Over the years, I have committed myself to projects that allowed both my strength and passion to flourish. In the process, I have acquired a competency in technical skills, design and marketing.

Work Experience
Since an early age, I have been experimenting with programming through basic HTML, CSS and JavaScript. I made my first foray into proper software development in high school when I participated in Young Rewired State Singapore, a coding competition in which my team clinched the Best in Show award. My skills were further developed as a Computer Engineering Student. From programming languages to hardware expertise, the course has granted me the privilege of acquiring a diverse set of technical knowledge.

I also possess a deep-rooted passion for graphic design. Through countless projects, I have first-hand understanding of the importance of good design in any context. The Innovation and Design-Centric Program in NUS has expanded on this, equipping me with tools such as the Value Proposition Canvas and Vigorous Prototyping in the Five Stages of Design Thinking, helping me better execute my ideas with models. These skills were put into practice through two projects, GramPS and MedSlack. The former is a GPS wearable to allow elderly who are reluctant to leave their house due to restricted mobility and the latter is a medical wearable system with a user interface to track patient's vital signs in the Emergency Department.

I am also comfortable with marketing. Having been put in publicity related leadership roles for multiple large-scale events, I picked up valuable marketing knowledge to achieve breakthrough in terms of popularity and reach. I also learnt to work with a tight budget and small manpower size, which is a common scenario in the start-up environment.

How I Can Contribute
My strength lies in my ability to see things from a wider perspective. In addition, what sets me apart is that I strike a balance between the logical and practical side of an engineer and the creativity and innovative side of a designer. Equipped with a wide variety of skill sets, I will be able to take on projects of various nature. Firstly, from a variety of internships and modules, I have learnt to pick up new frameworks and languages more quickly. Secondly, my experience with design-thinking allows me to frame problems properly instead of being bounded by set requirements. Lastly, the multitude of types of work I have been involved in allows me to inject fresh perspective into any project. Apart from the skills I possess, my gritty personality and eagerness to learn ensures that I will be ready to take on any challenges in this internship journey.

Internship Objective
In the upcoming year, I am seeking an internship experience which allows me to improve on my programming, designing and product development skills. I am also looking forward to contributing back to the technology industry, which has brought so much convenience to the world. With my relevant exposure to web design and general coding through my courses and past internships, I believe that I can contribute on both technical and business fronts.

Education

National University of Singapore *(Course details in Appendix A)*

Aug 2015 - Present — Bachelor of Engineering (Honors) in Computer Engineering
Aug 2016 - Present — Innovation & Design-Centric Program
July 2017 — Vancouver Summer Program: University of British Columbia

Jan 2009 - Dec 2014 — **Dunman High School**
Integrated Programme (IP)
Singapore-Cambridge General Certificate of Education Advanced Level

Work Experience

July 2017 – Present — **Red Dot Robotics**
Robotics Engineer Intern

- Robot Operating System (ROS)
  - Configured ROS through Raspberry Pi to be Plug-and-Play enabled on autonomous robots.
  - Using ROS to operate tester robot with sensors like 2D and 3D Lidar and Ultrasound.
- Computer Vision – Image Training and Annotation
  - Aiding a computer vision scientist to train images taken from the vehicle to detect road markings such as stop lines.
  - Writing codes to improve the image training.
- Understanding autonomous vehicle industry in Singapore.

Dec 2016 – Jan 2017 — **ExchangeBuddy**
Intern

- Graphic Design
  - Designed the logo and T-shirt for V2.0.
  - Involved in the revamping of ExchangeBuddy.
- Marketing
  - Involved in discussion and provided suggestions for social media campaigns.
  - Participated in NUS programs to mingle with exchange students, taking the opportunity to introduce ExchangeBuddy to exchange students in Singapore.
- Front-end Programming (Basic)
  - Developing the V2.0 for ExchangeBuddy during the Winter holidays.
  - Learnt JavaScript and frameworks and libraries such as ReactJS, Material UI and NodeJS.

Jul 2016 — **Orbital 2016**
Bostock Level

- Created a simple filtering application using ReactJS.

Jan 2015 – Jul 2015 — **Change for Good (Social Initiative Project)**
Lead Architect
http://cfg.nfshost.com

- Involved in project planning and architecture of manual vending machine.
- Obtained grants from Singapore Youth Council, Singapore Kindness Fund, Picture Perfect Productions.

Mar 2015	**Graphic Designing** *Freelancer*

- Name Cards Design.

Scholastic Achievements/Extracurricular Activities

Jun 2014	**Awards**

- Young Rewired State (YRS) – Best in Show award.
  - Designed an application in a team of four, for Singapore to tackle the problem of the seasonal haze in Singapore, winning air tickets to International YRS in London.

Aug 2016 - Apr 2017	**School Contributions**

- Inter-Hall Games Webmaster and Social Media Manager.
  - http://bit.do/ihg1617
  - Led a team of 4 for website maintenance and updating.
- Activities in Kent Ridge Hall:
  - Volleyball Captain.
  - Graphic Design Team.

Aug 2015 - Apr 2016	**School Contributions**

- Activities in Kent Ridge Hall:
  - Video Production Team.
  - Information Technology Committee.

Apr 2013 – Jun 2014	**Student Councilor and House Committee**

- House Captain and Executive Committee Member:
  - Publicity Head for two major school-wide events in Dunman High School.

Skill Sets & Proficiency Level

Multimedia	Adobe Photoshop/Illustrator CS6, Adobe Premiere Pro Audacity Audio Editor	Intermediate Proficient
Web	HTML, CSS, Adobe Experience Design CC (Beta)	Proficient
Programming / Scripting	Java, C C++, Python, JavaScript, Unix Shell Scripting (bash, sh)	Proficient Intermediate
Hardware	Robot Operating System (ROS), Arduino, Raspberry Pi, ARM Assembly Language Programming, FPGA	Intermediate
Editors	Vim, Nano, Sublime Text	Proficient
Integrated Development Environment (IDE)	Visual Studio, Eclipse	Proficient
Miscellaneous	Content Generation, Social Media Management, Event Planning	

Language Proficiency

Spoken	English – fluent; Mandarin – fluent
Written	English – competent; Chinese – competent

Degree: Bachelor of Computing (Honors) in Computer Engineering
Cumulative Average Point: 4.01 / 5.00

Year	Level	Course Description	Grades
Aug – Nov 2015	Year 1/Semester 1	Introduction to Computer Engineering	A
		Programming Methodology	B-
		Discrete Structures	B-
		Quantitative Reasoning	A-
		Mathematics I	S
Jan – May 2016	Year 1/Semester 2	Electrical Engineering	B+
		Data Structure and Algorithms I	S
		Critical Thinking and Writing	A
		Mathematics II	B
		Physics IIE	A-
Aug – Nov 2016	Year 2/Semester 1	Effective Communication for Computing Professionals	A
		Software Engineering	B-
		Digital Fundamentals	B+
		Devices and Circuits	B
		Practicing Design Thinking #	A-
		Changing Landscapes of Singapore	B
		Roots and Wings – Personal and Interpersonal Effectiveness 1.0	CS
		Independent Work – Orbital Project	CS
Jan – May 2017	Year 2/Semester 2	Signals and Systems	A-
		Real-Time Operating Systems	B+
		Programming for Computer Interfaces	A-
		The Theatre Experience	B
		Innovation & Design-Centric Program Project #	IP
Jun – Jul 2017	Year 2/Special Term 2	Design in the Public Realm	89%*
		Landscapes and Parks in the Vancouver Region	90%*
Aug – Nov 2017	Year 3/Semester 1	Industrial Attachment	IP
		Innovation & Design-Centric Program Project #	IP

The **Innovation & Design-Centric Program** is a program of a different track for engineering students. Students get to work on engineering problems using design thinking principles in a team of various engineering backgrounds. Projects vary from Internet of Things to Mechanical Designing. Students must find pain points of case studies chosen to design and engineer a product for the specific problem. This program includes design thinking modules *(Practicing Design Thinking)* and year-long projects *(Innovation & Design-Centric Program Project)*.

Blue: Design-related Courses
Green: Technical Courses

NUS Grading Scale:

A+ & A (5.0); A- (4.5); B+ (4.0); B (3.5); B- (3.0); C+ (2.5); C (2.0); D+ (1.5); D (1.0); F (0)

S = Satisfactory; U = Unsatisfactory

CS = Completed Satisfactorily; CU = Completed Unsatisfactorily

EXE = Exempted; IC = Incomplete; IP = In Progress; W = Withdrawn

*For summer program in Year 2/Special Term 2, University of British Columbia uses their own marking scheme against a full 100% score