Tan Wei Hao

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Personal Statement

About me

I am Wei Hao, a second-year student at National University of Singapore, majoring in Computer Science. My interest in technology started in secondary school, I tinkered with my own robots, built a Micromouse, competed at the inter-school level as well as the world level. I learnt programming by myself and participated in programming competitions. I took as many Computing subjects as possible outside of school. I actively took risks and did not follow the socially 'normal' route that was deemed at that time to be 'safe'.

Relevant Work Experiences

After graduation from school and the army, my friends found regular part-time jobs, I sought out to do something radically different that could help me grow in terms of technical skills as well as business acumen. I approached a few companies through connections of friends and asked if the company had something that could be potentially improved through technology. I eventually found Kydon Learning Systems Institute, a learning solutions company. I investigated their problem, which I found out was manually creating EPUB files from scratch, which was tedious and time consuming. Within two weeks of the first contact and studying the problem, I threw together a prototype and proof of concept. I created an WYSIWYG inline XHTML file editor, written in Python. The best feature was the WYSIWYG look of the app, as many of the users were designers, not technically proficient enough to edit HTML code. Over a course of development of two months, my solution could automate many areas of the production process, saving at least 30% of the production time.

Strengths and Weaknesses

My biggest strength is being independent. I thrive on the freedom to learn things by myself. I am able to work with little close supervision or micromanaging, while not afraid to ask when I am stuck. Most of my self-initiated projects we're started with me having close to zero knowledge about the tech (react, meteor), but I was able to learn them in relative short time period of one to two months, and develop a full project around it.

My biggest shortcoming is that I may be slightly difficult to talk to. I tend to jump to conclusions and overthink what people are trying to tell me or ask from me. I'm aware of this fact and constantly working on myself to improve my communication skills

Internship Objective and How I Can Contribute

I fully understand and empathize with the startup culture. I bring to the table the correct attitude that is required to succeed in the competitive landscape. I hope to significantly impact the projects that I work on and feel that I make a difference in the workplace.

I am a jack of all trades. I have experience in both frontend and backend development. I was responsible for the business side of my hackathons, which was good enough to reach the finals. This evidences the fact that I am also good with the business side of things. I am not afraid to roll up my sleeves and put in the work to make myself useful member of any team.

I hope to broaden my philosophy and knowledge in the techno-prenuerial area. I feel unparalleled fulfillment when I work on and see results in something that I am passionate about. I believe that the at a startup, I will share my vision with people of similar values and that makes a much more cohesive team.

Education

NATIONAL UNIVERSITY OF SINGAPORE | UNIVERSITY | 2016 – 2020 (ONGOING)
· Bachelor of Computing (Honours) in Computer Science

SAINT ANDREW'S JUNIOR COLLEGE | HIGH SCHOOL | 2012-2013 | 'A' LEVELS
· Singapore-Cambridge General Certificate of Education Advanced Level
· H3 Physics, H2 Physics, H2 Computing, H2 Mathematics, H1 Economics, H1 General Paper, H1 Project
  Work

Employment

PORT OF SINGAPORE AUTHORITY (NOT YET BEGUN) | MAY 18 – AUG 18
Software Engineering Intern
· Will focus on port automation processes

NATIONAL UNIVERSITY OF SINGAPORE | JAN 18 – MAY 18
Teaching Assistant
· Taught a tutorial group CS1010E: Programming Methodology course, conducted in 'C'

**KYDON LEARNING SYSTEMS INSTITUTE | MAY 16 – AUG 16 / MAY 17 – AUG 17 / DEC
17 – JAN 18**
Independent Solutions Developer
· Improved existing processes by implementing innovative solutions (WYSIWYG editor for XHTML files).
  Reduced production time by 30%(3 weeks out of 10 weeks development time) and increased
  productivity of the project.

SINGAPORE ARMED FORCES | MAY 2014 – MAR 2016
National Service Fulltime (Intelligence Specialist)
· Served National Service holding rank of 3rd Sergeant (3SG) at 3rd Division Artillery Appointed as
  Intelligence Specialist, to assist the intelligence officers in meticulously organising intelligence on
  enemy positions and planning out next move of attack. Responsible for various administrative roles

PRICEWATERHOUSECOOPERS | FEB 2014 – APR 2014
Risk Assurance Temporary Assistant
· Supported senior staff and managers on varied assignments ranging from administrative office-based
  tasks to working on client engagements relating to internal audit, business process reviews and
  management advisory-related work

Scholastic Achievements/Extracurricular Activities

**THE NUSCHOIR: IT MANAGER | MAY 2017 – MAY 2018
(ONGOING)**
· Head of the IT, Outreach and Publicity team
· Designed and created publicity material, directed the social media marketing campaign for recruitment
  and concert sales

- Managed The NUSChoir's social media accounts (Instagram, Facebook, YouTube)

FINALIST IN SIA APP CHALLENGE 2017   **| OCT 2017**
- Top 6 finalist of the student category
- React Native app, both Android and iOS compatible

ALL JAPAN MICROMOUSE COMPETITION   **| NOV 2015**
- Achieved 11th place (out of 50)

SAJC JACOB BALLAS AWARD   **| JUL 2014**
- Won the SAJC Jacob Ballas Award for 5 Distinctions at A Levels (academic excellence)

IDA JC COMPUTING AWARD   **| FEB 2012**
- Awarded the inaugural JC Computing Scholarship. Given to bright 'O' level (or equivalent) students who are pursuing H2 Computing at 'A' Levels

TECHNOPRENUERIAL
- Personal Projects:
    - https://github.com/CS2103JAN2018-W09-B3/main - Project for Software Engineering Module
    - http://showcaseyou.herokuapp.com/ - Project for NUS Orbital Programme
    - https://fausticsun.github.io/RedditGuessr/ - 24hr Hackathon Idea
    - https://zerothmmr.wordpress.com/ - 11th Fastest Micromouse Robot

Skill Sets and Proficiency

Programming	Java	Proficient
	C	Proficient
	C++	Intermediate
	Python	Proficient
	Shell Scripting	Basic
Web	HTML, Javascript, CSS	Proficient
Web Apps (Full Stack)	React	Proficient
	Meteor	Intermediate
	Redux	Basic
	MongoDB	Intermediate
	GraphQL	Basic
Mobile Development	React Native App	Intermediate
Operating Systems	Windows	Proficient
	Unix	Basic
Multimedia	Premiere Pro CC 2017	Intermediate
	Photoshop CC 2017	Proficient

Degree: Bachelor of Computing (Honours) in Computer Science

Cumulative Average Point: 3.94 / 5.00

Year	Level	Course Description	Grades
Aug – Nov 2010	Year 1/Semester 1	Programming Methodology	A-
		Calculus for Computing	B+
		Oratory and the Public Mind	S
		Linear Algebra	S
		Discrete Structures	S
Jan – May 2011	Year 1/Semester 2	Data Structures and Algorithms I	A
		Computer Organisation	B
		Probability and Statistics	B
		Quantitative Reasoning	B+
		Writing Women	CS
Aug – Nov 2011	Year 2/Semester 1	Data Structures and Algorithms II	A-
		Introduction to Computer Networks	B
		Introduction to Operating Systems	B-
		'OB' Markers	B+
		Asking Questions	CS
Jan – May 2012	Year 2/Semester 2	Effective Communication for Computing Professionals	In Progress
		Software Engineering Project #	In Progress
		Introduction to Artificial Intelligence	In Progress
		Physics for Engineering IIE	In Progress
		Food and Health	In Progress

The **Software Engineering Project** focuses on designing and implementing a tool called a Static Program Analyzer (SPA). A SPA reads in a program written in SIMPLE and answers user's queries based on the input program. This allows the user to gain an understanding of the input program, which is especially useful when the input program is long and complex. This is a project done in a team of 6 people. This team is further sub-divided into 2 teams with 3 members each. The 2 teams would tackle 2 different areas, namely the Program Knowledge Base (PKB) and the Program Query Language (PQL). The PKB handles the parsing and storing of the input program into its data structures. Whereas, the PQL receive queries from the user and builds a query tree. The nodes from the query tree then query the PKB through a façade to retrieve the corresponding datasets in a leaf to root node traversal, performing cross-products or intersections along the way. The final result is then displayed to the user via a result projector using a Graphical User Interface (GUI).

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