

## EDUCATION

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ETH ZURICH	Zurich, Switzerland
<b>Computer Science MSc</b>	Ongoing
<ul style="list-style-type: none"> <li>• <i>Focus track</i>: Theoretical Computer Science</li> </ul>	
NATIONAL UNIVERSITY OF SINGAPORE	Singapore
<b>Computer Science and Mathematics Double Degree Programme</b>	May 2016
<ul style="list-style-type: none"> <li>• <i>Computer Science</i>: 4.7/5 GPA; completed focus areas in “Algorithms &amp; Theory” and “Artificial Intelligence”</li> <li>• <i>Mathematics</i>: 4.5/5 GPA; majored in Applied Mathematics with additional Mathematics courses such as graduate Recursion Theory</li> <li>• <i>Honours</i>: Dean’s List (top 5%), First Class Honours in Computer Science, and First Class Honours in Applied Mathematics</li> <li>• <i>Valedictorian finalist</i>: One of the 3 final candidates to be considered for Valedictorian of School of Computing</li> <li>• <i>Computer Science Thesis</i>: Designed methods to maintain dynamic maximal independent sets Nominated for NUS Outstanding Undergraduate Researcher Prize (an annual, university-wide competition)</li> <li>• <i>Mathematics Thesis</i>: Studied notions of Kolmogorov complexity of binary strings in automata theory and CFGs</li> <li>• <i>University Scholars Programme</i>: A selective (180 students) multidisciplinary academic programme for undergraduates Awarded President’s Honour Roll which recognizes outstanding academic accomplishments and student-led co-curricular activities</li> </ul>	

## EXPERIENCE

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DSO NATIONAL LABORATORIES	Singapore
<b>Defence Scientist — Cognitive Fusion Lab (CFL)</b>	Jun 2016 – Sep 2018
<ul style="list-style-type: none"> <li>• Applied A.I. techniques to security related problems in military contexts, including cryptanalysis, SAT solving and reverse engineering</li> </ul>	
DSO NATIONAL LABORATORIES	Singapore
<b>Research Intern — Cognitive Fusion Lab (CFL)</b>	May 2013 – Jul 2013
<ul style="list-style-type: none"> <li>• Worked on a research project to improve the performance of speech-to-text recognition for military applications</li> <li>• Constructed a novel technique that uses High Order Semi-Conditional Random Field (HOSemiCRF) to improve accuracy</li> </ul>	
NATIONAL UNIVERSITY OF SINGAPORE	Singapore
<b>Research Assistant — SeSaMe (Augmented Reality Library)</b>	Aug 2012 – Dec 2012
<ul style="list-style-type: none"> <li>• Designed a framework and protocol to interface mobile devices with the server and communicated it to other engineers</li> <li>• Developed an algorithm that identifies spatial coordinates and orientation of user within a building using visual landmarks</li> </ul>	
DEFENCE SCIENCE & TECHNOLOGY AGENCY (DSTA)	Singapore
<b>Research Intern — C4I development (PC8)</b>	Feb 2011 – May 2011
<ul style="list-style-type: none"> <li>• Worked with other engineers to harness and exploit science and technology to meet the defence needs of Singapore</li> <li>• Designed an in-house Unmanned Aerial Vehicle (UAV) algorithm that maps image points to actual geolocation coordinates</li> <li>• Generated test datasets to verify correctness of the developed algorithm with commercial software as ground truth</li> </ul>	

## TEACHING AND SERVICE

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NATIONAL UNIVERSITY OF SINGAPORE	Singapore
<b>Teaching Assistant — CS1101S, CS1231, CS2020, CS3230, CS4344, GET1031</b>	Aug 2012 – May 2016
<ul style="list-style-type: none"> <li>• Collaborated with over 8 faculty members on refining teaching materials and pedagogies to suit student needs</li> <li>• Led discussion groups for a total of 86 students across 6 different courses on topics including programming methodology, computational thinking, data structures and algorithms, design and analysis of algorithms, and discrete structures</li> <li>• Averaged a feedback score of 4.7/5 across all tutored courses (faculty average: 4.16/5) with 15 nominations for Best Teaching</li> </ul>	
NATIONAL UNIVERSITY OF SINGAPORE	Singapore
<b>University Scholars Programme (USP) Mentor</b>	Aug 2012 – May 2016
<ul style="list-style-type: none"> <li>• Helped first-year USP students navigate through a variety of academic requirements and placated their various concerns</li> <li>• Set up a cohesive network for Computer Science students in the USP where juniors easily seek advice and mingle</li> <li>• Met up regularly with juniors to ensure their well-being and connect them with appropriate seniors and/or faculty members</li> </ul>	
TEMASEK JUNIOR COLLEGE	Singapore
<b>Course Instructor</b>	Jan 2014 – May 2014
<ul style="list-style-type: none"> <li>• Initiated a student outreach programme to encourage young students to explore the field of Computer Science</li> <li>• Planned and conducted 11 sessions of enrichment courses that teaches computational thinking and problem-solving</li> <li>• Concluded the course with 7 students expressing further interest in game development</li> </ul>	

## ADDITIONAL INFORMATION

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- *DSTA-DSO Scholarship*: Awarded in 2011
  - *Languages/Technologies*: Java, C++, Python, Javascript, MiniZinc, C, C#, Scheme (Basic), Prolog (Basic)
  - *Computer Science UROP*: Worked on a reductionist approach to computer vision with applications in robot grasping with uncertainty
  - *RoCoCo*: Used constraint programming to design a web-based round robin tournament scheduling algorithm
  - *Poker AI Bot*: Implemented a 2 Player Limit Texas Holdem Poker bot using Monte Carlo Tree Search techniques
  - *Robust Airport Scheduling*: Devised and analysed algorithms for airport gate scheduling. Solution was robust enough to minimise collisions when random delays were introduced to perturb a dataset of actual departure and arrival times