





# Eric Han


Graduate Tutor  
PhD Student


 Singapore

 +65 9298 2927

 <https://eric-han.com>

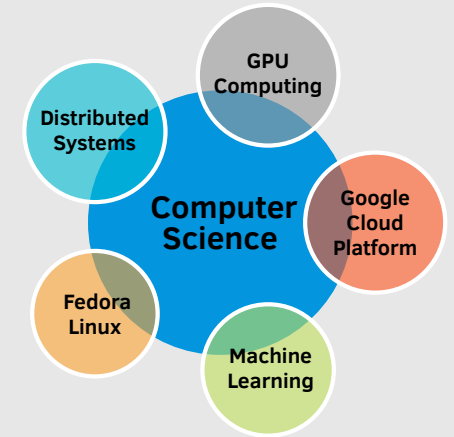
 [mail@eric-han.com](mailto:mail@eric-han.com)

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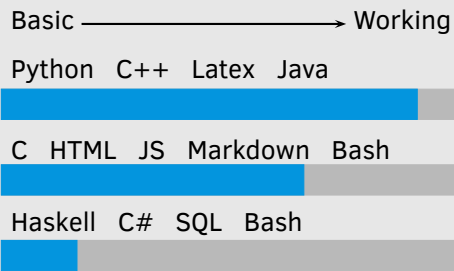
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## Skills

### Overview



### Programming / Tools



## Projects

- CS6203** - Split Neural Networks Learning in Vertical Federated Learning (VFL); Designed and implemented a general VFL framework with Unencrypted, Paillier, Threshold-Paillier and SMPC.
- Fedora-SoC** - Created a sub-flavor of Fedora Linux that is designed for remote programming exam taking.
- CS5242** - Experimented with a deep convolution neural network with an output neuron for learning the confidence of match between ligands and proteins.

## Education

2018-current	<b>Doctor of Philosophy (PhD) in Computer Science</b> <i>PhD Student, expected to graduate in 2023</i> Current Cumulative Average Point (4.92/5.00)	NUS
2013-2017	<b>Bachelor of Computing</b> <i>Graduated With Honours (Highest Distinction) in Computer Science</i> Completed the Turing Programme.	National University of Singapore (NUS)

## Achievement

2018	<b>Outstanding Undergraduate Researcher Prize</b> Awarded (University-wide) to outstanding Final Year Projects.	NUS
2017	<b>Dean's List Recipient</b> Awarded to top 5% of the cohort.	NUS
2016	<b>Certificate of Merit in Algorithms &amp; Theory Focus Area</b> Awarded to students who have done well in their focus area.	NUS
2013	<b>AUS Scholar</b> <i>Awarded the A*STAR Undergraduate Scholarship (AUS)</i> Prestigious scholarship awarded to budding scientists.	Agency for Science, Technology and Research (A*STAR)

## Research

Feb 2021	<b>High-Dimensional Bayesian Optimization via Tree-Structured Additive Models</b> 35 <sup>th</sup> Assoc. for the Adv. of Art. Intel. (AAAI) Conference [Pub. Link] Reduce computation required by additive models and facilitate faster model learning by reducing the model complexity; constraining the additive dependency graph to tree structures. <ul style="list-style-type: none"><li>Propose a hybrid method to learn the additive tree structure via both Gibbs sampling and edge mutation.</li><li>Propose a zooming technique that extends compatible additive models to continuous domains.</li></ul>	
9 Sep 19-12 Sep 19	<b>GPSS 2019</b> <i>Gaussian Process and Uncertainty Quantification Summer School.</i>	The University of Sheffield
AY2016/17 1 Year	<b>Final Year Project</b> <i>Feature Subset Selection (FSS) using Reinforcement Learning (RL)</i> [Report Link] FSS algorithm are able to find features for a generic dataset and balance between prediction performance and speed. <ul style="list-style-type: none"><li>Proposed and implemented 2 different wrapper based frameworks, built on several of Google deepmind's works.</li><li>Proposed and tested a novel modification of Q-Learning and applied it to FSS. Tested Q-Learning based framework against 22 state of the art algorithms across 8 datasets and 2 inductors.</li></ul>	NUS / A*STAR IHPC CS AI Group

## Experience

8 Aug 18-current	<b>Graduate Tutor</b> <i>Tutor for Junior and Senior Undergraduate modules</i> Teach lectures, tutorials and consultations; Managed tutors and gradings; Developed module tools.	NUS
2011-current	<b>Church Volunteer</b> <i>Head Of Information Technology, Cell Group Leader, Tutor</i> Lead and manage IT infrastructure and development team; Lead and counsel people; Teach GCE 'O' and 'A' levels subjects.	Impact Life Church
6 May 15-31 Dec 15	<b>Research Intern</b> <i>Autonomous Machine Learning using HPC Approaches</i> Contributed to a cloud based Machine Learning platform.	A*STAR IHPC CS DC Group