

WAH LOON KENG

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EDUCATION

Lafayette College, Pennsylvania	expected May 2016
B.S. in Mathematics, Minor in Computer Science	Overall GPA: 3.88

RESEARCHES

Singapore-ETH Smart Cities Lab	late-Summer 2015
<i>Road network research and software engineering.</i>	

- Applying vertex cover and graph theory to solve network optimization problems. *In progress.*

Lafayette College EXCEL Program	Summer 2015
<i>Computational Geometry with Dr. Ge Xia.</i>	

- Vertex Cover, a signature NP-hard problem. *In progress.*

Perimeter Institute for Theoretical Physics Summer Student	Summer 2014
<i>Quantum Foundations with Dr. Matthew Pusey and Dr. Tobias Fritz.</i>	

- Correlations in causal structure. Application of Quantum Computation and Information to the foundations of quantum mechanics.

Notes: [Correlations in C3](#) and [BlockCode and Bundled Form](#), W.L. Keng.

Lafayette College EXCEL Program	Summer & Fall 2013
<i>Computational Geometry with Dr. Ge Xia.</i>	

- Delaunay Triangulation, graphs, spanner problems. Proved that the Yao-5 graph, useful in wireless networks, is a spanner, i.e. shortest distance always exists.

Published: [New and Improved Spanning Ratios for Yao Graphs](#), Barba et.al.

PROJECTS (ON GITHUB)

[jarvis](#) - A powerful AI butler bot for startups/team projects; cloud-deployable and cross-platform.

[lomath](#) - Data analytics, math module for NodeJS inspired by Lodash/Underscore.

[telegram-bot-bootstrap](#) - A bootstrap for Telegram bot with full API support, cloud-deployable.

[dokker](#) - Automated JS code documentation generator.

[Risk-game](#) - Simple AI to play the game Risk, with statistical analysis.

[Machines](#) - Implementation of Turing Machines, PDA, NFA, DFA, with a theoretical thesis on the link between their memories and powers.

EMPLOYMENT

<i>Data Analysis, Automation, HTML Email Research, Fulcrum Tech, Inc</i>	2014 - Present
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<i>Graphic Designer and Proctor, Lafayette College Foreign Languages Dept.</i>	2014 - 2015
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<i>Physics Supplemental Instructor/Grader, Lafayette College</i>	2012 - Spring 2014
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LANGUAGES

Computer	Proficient: Java, C++, Node.js, HTML/CSS/Sass, Mathematica Basic: R, Python, Matlab
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Spoken	Fluent: English, Chinese, Malay, Cantonese, Hokkien
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ENTREPRENEURSHIP AND LEADERSHIP

GLOBAL HACKERS

July 2015 - present

Co-creator

- A tight network of engineers, researchers, social entrepreneurs, business consultants, and multi-talents collaborating on startups to solve global problems using exponential technologies.

Hermes Voyage (Yi Liu Yi)

August 2015 - present

Co-founder and CTO

- A startup to decentralize global healthcare, enforce transparency, and create a competitive marketplace, using exponential technologies such as A.I. *More info to be public soon.*

SOLVE-X

August 2015 - present

Co-founder

- A global solvathon aiming to gather the best talents and the biggest sponsors to solve billion-people-problems using exponential technologies. *Planned for August 2016, in Singapore.*

TECHNICAL COURSES

Freshman

MATH 263 Calculus III (A)
MATH 264 Differential Equations (A)
MATH 312 Partial Differential Equations (A)
PHYS 151 Accelerated Physics (A)
PHYS 218 Oscillatory & Wave Phenomena (A)

Sophomore

MATH 290 Transition of Theoretical Math (A)
MATH 300 Vector Spaces (A)
MATH 356 Real Analysis I (B+)
PHYS 342 Electromagnetic Fields (A)
PHYS 351 Quantum Theory (A)
PHYS 327 Advanced Classical Mechanics (A)
PHYS 338 Advanced Physics Lab (A)

Junior

CS 150 Data Structures and Algorithms (A)
CS 205 Software Engineering (A)
CS 303 Theory of Computation (A)
MATH 351 Abstract Algebra (A-)
MATH 358 Topology (B)
MATH 391 Adv. Multivariable Calculus (A)
MATH 335 Probability (A)

Anticipated (Fall 2015)

CS 202 Advanced Algorithms
CS 420 Artificial Intelligence
MATH 375 Applied Fixed & Mixed Effect Models

AWARDS

<i>Lafayette College Benjamin F. Barge Mathematical Prize</i>	2014
Second, Third - <i>Lafayette College Barge Math Competitions</i>	2013 - 2014
Second - <i>LVAIC Regional College Math Competition</i>	2012
Dean's List - <i>Lafayette College</i>	2012 - 2014
Gold, Top 5 team - <i>National Physics Competition, Malaysia</i>	2010
Gold - <i>ICAS International Math Competitions, University of New South Wales</i>	2009