Xiao-Yue Gong

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EDUCATION   GRE: 337/340; GRE Mathematics Subject: 97%.

Massachusetts Institute of Technology   2017.8-present Boston
Operations Research (Ph.D)   GPA: 5.0/5.0

New York University Shanghai   2013.6-2017.5 Shanghai
Honors Mathematics (B.S.)   major honors & summa cum laude
Interactive Media Arts (B.S.)

New York University [Phi Beta Kappa honor society]   2015.8-2017.1 New York
New York University Tel Aviv   2014.7-2014.7 Istanbul
Budapest Semesters in Mathematics   2015.6-2015.8 Budapest
Tel Aviv University   2014.6-2014.7 Tel Aviv
Business Entrepreneurship Program

No.2 High School of East China Normal University   2010.8-2013.6 Shanghai
Lake Forest High School   2011.9-2011.10 Illinois
High School Exchange Program

MERIT AWARDS & SCHOLARSHIPS

- MIT Bitcoin Hackathon 2018 ARCC Prize   Asia Reserve Currency Coin
- MIT IDEAS Global Challenge 2018 winner   MIT
- 1 of 14 shortlisted finalists for Rhodes Scholarships (China)   The Rhodes Trust
- Provost's Award 2017   NYU Shanghai
- summa cum laude   New York University
- Phi Beta Kappa   Phi Beta Kappa Society
- Major Honors in Honors Mathematics   NYU Shanghai/NYU
- 2016 United Nations Youth Assembly Resolution Fellowship   The Resolution Project
- President's Service Award 2016   New York University
- Summer Undergrad Research Experience   NYU Courant Institute
- NYU Shanghai Dean's Undergraduate Research Fund 2016   NYU Shanghai
- Venturewell 2016 Entrepreneurs-Team   Venturewell
- NYU Reynolds Changemaker Challenge Champion 2015   NYU Reynolds Program
- 2015 Autodesk IMA Smart Home Design Challenge Winner   Autodesk
- CPB Scholarship 2014   Israeli Government
- Dean's List 2013-2016   NYU Shanghai
- Recognition Award 2013–2016   NYU Shanghai
- Resident Assistant Scholarship 2014-2015   NYU Shanghai
- Intel 26th Shanghai Adolescents Science&Tech Innovation Fair 1st Prize   Intel

MATHEMATICAL STUDIES

Researcher, **NYU Shanghai Computer Science Lab**   2017.6-2017.8+

- Coauthored paper "Efficient Entropy for Policy Gradient with Multi-Dimensional Action Space" was accepted at ICRL Conference's workshop.

Student, **Courant Institute of Mathematical Sicences**   2015.9-2017.1

- Graduate/PhD level classes: Real Variables, Random Graphs, Stochastic Calculus, Harmonic Analysis, Differential Geometry I, Topology I, Functional Analysis, Advanced Topics in Probability: Entropy and Ergodic Theory.

Student, **Budapest Semesters in Mathematics** 2015.6-2015.8
- Advanced Combinatorics, Conjecture and Proof, Real Functions and Measures

President, **New York University Mathematics Society** New York, 2016.5-2017.1
- Arranged weekly math talks and maintained a speaker and member database.
- Made yearlong plan and raised the club budget received by 17%.
- Allocated tasks and managed the executive board.
- Organized participation in mathematical conferences and competitions.
- Facilitated communications among the math community of undergrads, grads and faculty at NYU.

Undergraduate Researcher, **Courant Institute of Mathematical Sciences** New York, 2016.3-present
- Drafted a research proposal under the supervision of Professor Efe Ok
- Studied the theory of the Möbius functions and applied this theory to finding characterisation of the Myerson value and the Shapley value in cooperative games in game theory
- Illustrated and summarised the results in the format of a complete research paper
- Presented the work at Summer Undergraduate Research Experience Symposium at Courant Institute of Mathematical Sciences

Teaching Assistant/Tutor/Grader, **Courant Institute of Mathematical Sciences** 2015.10-2017.1
- Worked as a teaching assistant/tutor/grader for Calculus I, Linear Algebra, and Introduction to Web Development & Programming

ENVIRONMENTAL DESIGN & ENGINEERING

Founder & CEO, **Aeolian Inc.** Shanghai + New York, 2015.9-present
- Envisioned and founded Aeolian as a social venture that combats the severe health effects of indoor air pollution in China by providing a smart air-purifying system
- Recruited team members and assigned responsibilities.
- Worked with legal consultants in drafting legal documents and patent applications
- Worked with journalists and public relation professionals to inform potential customers, investors and mentors about Aeolian
- Conducted industry research and customer survey with team members
- Identified and communicate with mentors and potential investors
- Worked with team members on business plans, financial projections and market research
- Presented and pitched in different formats in front of a variety of audience

Researcher, **Project: Air Butler-Indoor Air Purifying System** Shanghai, 2015.1-2015.6
- Conducted prior art search for similar products
- Designed and prototyped
- Entered Autodesk IMA Smart Home Design Challenge 2015 and was one of the two winners

Student Researcher, **Project: Application of Dye-Sensitized Solar Cells** Shanghai, 2010.10-2011.4
- Prepared and produced dye-sensitised solar cells for use on sunglasses at the Advanced Materials Department of Fudan University
- Documented the lab results in the form of a scientific paper and received Shanghai Pudong Tomorrow's Science & Technology Star Best Speech Award in addition to a couple of scholarships
- Obtained a design patent in China for this invention

Student Researcher, **Project: Segmented Usage of Alkaline Cells**   Shanghai, 2011.10-2012.4

- Surveyed neighborhood committees in Zhabei District on disposal of used alkaline cells
- Received Environmental Science First Prize and scholarships at Intel 26th Shanghai Adolescents Science&Technology Innovation Fair

ENTREPRENEURSHIP

Team Leader, **NYU Reynolds Changemaker Challenge**   New York, 2015.9-present

- Conducted customer survey and industry research with the team
- Drafting the business plan and financial documents with the team
- Received NYU Reynolds Best Overall Venture award with $10,000 grant
- Kept track of venture funds and budget

Team Leader, **Venturewell E-Team Program**   New York+Boston, 2016.1-present

- Prepared the business proposal and visual documents
- Identified and solicited recommendation letters from mentors and potential investors
- Successfully entered Stage-1 E-Teams with $5,000 grant.
- Currently working with mentors to develop the venture further to continue onto Stage 2

Student, **Tel Aviv University**   Tel Aviv, 2014.6-2014.7

- Attended the Business Entrepreneurship Summer Program on full scholarships

Co-Director, **HackShanghai**   Shanghai, 2014.5-2015.11

- Organized the largest international college hackathon in China with a team of 12 students, which inaugurated an annual tradition at NYU Shanghai
- Advocated hackathon culture in China
- Provided hardware, legal, operational and marketing support
- Identified and negotiated with sponsors, and maintained a database of sponsors

CRISIS RESPONSE & CONFLICT RESOLUTION

Resident Assistent   Shanghai, 2014.8-2015.5

- Acted as a first-responder to emergencies and crises that occur in a residence hall with 600+ students
- Mediated roommate agreements and resolved conflicts among residents
- Conducted 1-on-1 meetings with 30+ residents each semester
- Documented illegal/prohibited incidences and enforced university residence hall policies
- Provided medical chaperone and guarantee of payment/insurance support
- Organised university-wide networking/musical events that engaged students, faculty and staff
- Provided a safe, caring special interest community environment for the purpose of fostering personal growth of residents

Cultural Ambassador   Shanghai, 2014.1

- Facilitated NYU Abu Dhabi students' transition to the Shanghai campus

PUBLIC OUTREACH & ENGAGEMENT

Dance Workshop Facilitator and Volunteer, **The Renewal Center**   Shanghai, 2013.10-2014.7

- Set up dance/physical education workshops at the Renewal Center, a place that provides shower, clean clothing, education and sometimes housing for the displaced
- Registered visitors for showers and handed out clean clothes of appropriate sizes and toothbrushes
- Organised donations of cash and of men's clothes to the Renewal Center from NYU Shanghai at the end of the 2014 spring semester

XLSforKids Volunteer Dance Workshop Facilitator, **OKiki Kindergarten** Shanghai, 2015.1-2015.5
- Set up volunteer dance workshops for kids at Okiki Kindergarten instructed by members of Xiao Long Shaker Dance Club
- Led the dance workshops with other members of NYU Shanghai XLS Dance Club to engage children in dancing, which became a traditional cooperation at Okiki Kindergarten and XLS Dance Club

Workshop Instructor, **MakeForKids** Shanghai, 2014.1-2015.8
- Designed and instructed Makeforkids workshops at hackspaces in Shanghai
- Educated young kids in the subject of electronics by helping them accomplish themed projects in each workshop

WORK EXPERIENCE

Legal Summer Intern, **Citibank China** Shanghai, 2014.7-2014.9
- Understood corporate authorization & prepared guidance notes on powers of attorney
- Conducted legal research on topics including Anti-Bribery Cases, Bank regulation, Company Law, Conflict of Law issues, Corporate Governance, Employment cases, Free Trade Zone, Funds Sales, Internet Banking, Litigation Case Updates, Securities Laws & Regulations
- Prepared Transaction Summaries, FAQs & Legal Case Studies, litigation timelines & summaries
- Familiarized with basic Citi Products: GCG & ICG
- Conducted ad-hoc analysis and translation of legal terms

Lab Student Worker, **NYU Shanghai Interactive Media Arts Lab** Shanghai, 2014.3-2015.1
- Assisted the daily management of IMA Lab;
- Provided tutoring for student hardware and software projects

PUBLICATIONS & CONFERENCES

Yiming Zhang, Quan Vuong, Kenny Song, **Xiao-Yue Gong**, Keith Ross, "Efficient Entropy for Policy Gradient with Multi-Dimensional Action Space"*Sixth International Conference on Learning Representations (Workshop Track)* Vancouver, Canada, 2018
Xiaoyue Gong, "A Unified Approach to characterization of the Myerson Value and the Shapley Value Through Application of the Möbius Functions" *Courant Summer Undergraduate Research Experience Symposium.* New York, United States. October, 2016
Xiao-Yue Gong, "Contemplation in Boisterousness"(in Chinese). *Science&Vie.* Shanghai: Shanghai Art and Literature Publishing House. January, 2011. Print.

Projects and Prizes

"Juretheum"–an affordable distributed justice system built on Ethereum smart contracts technology, Prize: Asia Reserve Currency Coin $3000 MIT Bitcoin Hackathon, March, 2018
"Transparency Dashboard"–an online analytics tool for machine learning decisions, Prize: 3rd Place $500 Hack for Inclusion (Bias in Machine Learning Track), March, 2018
Federal and state level data-driven policy recommendation paper for Internet and Cybersecurity Challenge, Prize: finalist $500 MIT Policy Hackathon, April, 2018

ATHLETICS & ARTS

Soccer: Midfielder in NYU Shanghai Women Soccer Team
Dance: Co-founder&Vice President of NYU Shanghai Xiao Long Shaker Dance Club; Beijing dance Academy Chinese Dance Level Eleven;
Sample Performance: Youtube keyword: "Moonlight contemporary Chinese Xiaoyue Gong".

OTHER LANGUAGES

Mandarin: native; **Wu(Shanghainese)**: native.