

Lixing Wang

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Description	Dedicated undergraduate pursuing dual degrees in Mathematics & Computer Science and Music at Brown University. Passionate about computer science and algorithms with a strong foundation in mathematics. Experienced in personal project development, demonstrating excellent time management and logical thinking. Proficient in Java, Python, C++, ReasonML, and Microsoft Office software. Skilled in multimedia software including Logic Pro and Final Cut. Extensive experience in electronic music production and expertise in jazz harmony.
Education	<p>Brown University, Providence RI, USA, Sep 2023 to Present</p> <ul style="list-style-type: none">• Computr Sci:An Integratd Intro. Topics: functional programming, data structure, recursion, tree search, sorting algorithms. Grade: A• Multivariable Calculus w/ Thry. Topics: vector analysis, partial differentiation, multiple integration, line integrals, Green's theorem, Stokes' theorem, and the divergence theorem. Grade: A• Linear Algebra With Theory. Topics: matrices, linear equations, determinants, and eigenvalues; vector spaces and linear transformations, inner products. Grade: A• Theory of Tonal Music. Topics: melody, harmony, part writing, counterpoint, keyboard skills, ear training, sight-singing, and composition. Grade: A• Analys:Funcntns of One Variabl Topics: Completeness properties of the real number system, topology of the real line, proof of basic theorems in calculus, infinite series, and the topology of Euclidean plane and 3-space. Grade: A• Graph Theory Topics: spanning trees, matching problems, coloring problems, planarity, and Ramsey Theory. Grade: A• Abstract Algebra Topics: groups, rings, and fields, with applications to number theory, the theory of equations, and geometry. Grade: A <p>International Baccalaureate - Shanghai World Foreign Language Academy (WFLA), Shanghai, China, Sep 2017 to Jun 2023 Grade: 44/45</p>
Academic Concentration	<p>Math & Computer Science Music Composition & Production</p>
Programming Languages	<ul style="list-style-type: none">• Object-Oriented: Java, Python, C++• Functional: ReasonML, Racket
Other Skills	<ul style="list-style-type: none">• Latex, SolidWorks, Logic Pro, Final Cut
STEM Awards	<ul style="list-style-type: none">• Finalist, International Mathematical Modeling Challenge, 2022• Global Silver Award, British Physics Olympiad Round 2, 2022• Distinction (Top 5%), American Mathematics Competition 12, 2021• Top Gold (Global Ranking), British Physics Olympiad Round 1, 2021• Honor Roll Distinction, Mathematics League in China Second Round, 2021

School Honors • Pentagonal Badge - Principal Awards (Nomination Award), Grade 12 at WFLA
• Tetragonal Badge - 2nd Prize, Scholarship Awards, Grade 11 at WFLA

Experiences *Student, Stanford Pre-Collegiate University-Level Math & Physics* Summer 2022

- Took undergraduate-level courses "Light and Heat" (XP645) on thermodynamics and optics and "Multivariable Differential Calculus" (XM521)
- Received 6 credits in total, A- for XP645 and A for XM521

Student, JHU Explore Engineering Innovation Summer 2022

- Explored a range of engineering domains such as electrical/computer, chemical, materials, and mechanical
- Built a noise monitor that uses LEDs to alarm the current noise level and show cumulative noise exposure
- Received 3 credits and an A

Core Component Design and Testing, Pneumatic Soft Tube-climbing Robot Project with SJTU 2020 - 2021

- Designed and built a pneumatic robot for tube inspection
- Gained experiences working with SolidWorks and 3d printed the components
- Result published in WFLA's journal

Student, NYU Tandon Eng Center K12 STEM Edu Machine Learning Summer 2021

- Introduced to DNN and CNN networks with linear algebra fundamentals
- Using Pytorch, implemented data augmentation and one-hot encoding to categorize photos

Student and Group Leader, Shanghai Jiaotong University (SJTU) Artificial Intelligence Autonomous Driving Summer Camp Summer 2021

- Coded a self-driving car using Tensorflow CNN for traffic signal detection and OpenCV image processing techniques for lane tracking
- Won 2nd Prize on Rong Chang SJTU AI Contest (Shanghai)

Extra-Curricular Activities *Individual Music Maker, Music Composition and Production* 2019 - Present

- Experienced with impressionism and kawaii bass
- Familiar with DAW, mixing and mastering techniques
- 200k+ views 1600+ followers on bilibili and certified musician on NetEase Music

Project Manager, WFLA Channel (Official Channel of WFLA) 2019 - 2022

- Edited interview series and taught newcomers about filming & editing
- Designed a new logo with animations which had been officially adopted

Speaker & Organizer, Mixing & Mastering Online Workshop 2022

- Led a series of workshops introducing modern music tech & workflow
- Streamed weekly in my community, and expecting no prior knowledge