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个人简介

布朗大学数学与计算机专业、音乐专业，双本科在读。对计算机与算法有极大的热情。具备扎实数学基础和个人项目开发经验，具备优秀的时间管理、逻辑思维和团队协作精神。熟悉Java、Python、C++、ReasonML等语言及office软件，及Logic Pro与Final Cut等多媒体软件。具有丰富的电子音乐制作经验与爵士和声知识。

教育经历

布朗大学，2023九月至今

- **计算机科学: 导论** 主题: 函数式编程, 数据结构, 递归, 树搜索, 排序算法。成绩: A
- **多元微积分与理论** 主题: 向量分析, 偏微分, 多重积分, 线积分, 格林定理, 斯托克斯定理和散度定理。成绩: A
- **线性代数与理论** 主题: 矩阵, 线性方程, 行列式和特征值; 向量空间和线性变换; 内积。成绩: A
- **调性音乐理论** 主题: 旋律, 和声, 声部写作, 对位法, 键盘技能, 听音训练, 视唱, 和作曲。成绩: A
- **分析: 单变量函数** 主题: 实数系统的完备性质, 实线的拓扑学, 基本微积分定理, 无穷级数, 以及欧几里德平面和三维空间的拓扑学。成绩: A
- **图论** 主题: 生成树, 匹配问题, 着色问题, 可平面性, 以及Ramsey理论。成绩: A
- **抽象代数** 主题: 群, 环, 域, 以及它们在数论, 方程理论和几何学中的应用。成绩: A

上海世界外国语中学 (IB), 2017九月至2023年六月, 成绩44/45

学术专业

数学 & 计算机科学
作曲 & 音乐制作

编程语言

- 面向对象: Java, Python, C++
- 函数式: ReasonML, Racket

其他技能

- Latex, SolidWorks, Logic Pro, Final Cut

STEM荣誉

- 特等入围奖, 第八届国际数学建模挑战赛国际赛 (中华区), 2022
- 全球银奖, 英国物理奥林匹克竞赛第二轮, 2022
- 全球优秀奖 (Top 5%), 美国数学竞赛12, 2021
- 超级金奖, 英国物理奥林匹克竞赛第一轮, 2021
- 一等奖, 美国“大联盟”第二轮, 2021

校内奖项

- 五角徽章- 校长特别奖 (提名奖) (12年级于WFLA)
- 四角徽章- 学业奖 (二等奖) (11年级于WFLA)

个人经历	<p>斯坦福大学预科线上数学与物理 2022夏季</p> <ul style="list-style-type: none"> ● 修读了本科级别课程“Light and Heat” (XP645) 涵盖热力学和和光学内容, 以及“Multivariable Differential Calculus” (XM521) 涵盖多变量微积分 ● 收到6个学分, 并分别获得了A- (XP645) 和A (XM521) 的成绩 <p>约翰霍普金斯大学工程创新项目 2022夏季</p> <ul style="list-style-type: none"> ● 广泛探索学习各种工程学领域, 包含电气电脑工程、化学、材料、与机械工程 ● 制造了一个噪声监测器, 使用多个LED来对噪音级别和累积暴露程度进行预警 ● 收到3个学分, 并获得了A的成绩 <p>气动软体爬管机器人项目 于上海交通大学 2020 - 2021</p> <ul style="list-style-type: none"> ● 负责核心部件的建模设计和改进, 学习使用SolidWorks和3D打印技巧 ● 机器人成果收录于WFLA的展报 <p>纽约大学坦登工程学院K12STEM机器学习 2021夏季</p> <ul style="list-style-type: none"> ● 学习DNN、CNN和线性代数基本原理 ● 使用Pytorch, 数据增广和独热编码等实现了一个照片分类器 <p>上海交大荣昶全国优秀中学生人工智能科技营 2021夏季</p> <ul style="list-style-type: none"> ● 使用Tensorflow CNN和OpenCV图像处理技术检测交通信号并跟踪车道, 实现了自动驾驶小车 ● 在荣昶交大人工智能大赛上海选拔赛中获得2等奖
其他活动	<p>独立音乐制作人 2019至今</p> <ul style="list-style-type: none"> ● 熟练使用DAW创作并制作电子音乐、爵士fusion、印象派古典乐等 ● 在Bilibili投稿, 拥有1600+粉丝和20万+点击, 获得网易音乐人认证 <p>世外频道 (上海世界外国语中学官方频道) 项目管理人 2019 - 2022</p> <ul style="list-style-type: none"> ● 参与剪辑制作校长特别奖获奖生采访视频、活动vlog等栏目 ● 设计了新版本的logo和动效, 已被官方采用 <p>混音母带线上 Workshop主讲人 2022</p> <ul style="list-style-type: none"> ● 发起了workshop系列, 讲解现代音乐制作技术的基本原理和工作流 ● 每周于Bilibili线上直播放送

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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