

Jeffrey Chen

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EDUCATION

- Massachusetts Institute of Technology 4.9/5.0 GPA Class of 2022
- MEng in Artificial Intelligence, Computer Science Major, Math Minor
 - Courses Taken by Jun '22: **Distributed Systems, Inference and Information Theory**, Algorithms for Inference, **Cryptography, NLP, Performance Optimization**, Advanced Algorithms, Machine Learning, Distributed Systems, **Cell Biology**, Real Analysis, Group Theory, Linear Algebra
 - Nominated by MIT for the **Rhodes Scholarship 2021**
- Harvard Summer and Extension School 4.0 GPA June 2016 - May 2018
- Cambridge Rindge and Latin School, Cambridge, MA 4.0 GPA Class of 2018
- Awarded **Edward Hopkins Scholarship** for having top 6 GPA in the class of 2018- 6k Scholarship prize

EXPERIENCE

- CSAIL - Berger Lab**, *Undergraduate Research* January 2021 - Present
- Currently working on multi-party homomorphic encryption system for secure federated Linear Mixed Model computation on GWAS(genomic data) written in Golang
 - Paper in which I am first author is accepted by RECOMB 2022, a major biotech conference(not arxivd yet)
- Dyno Therapeutics**, *Machine Learning Intern* May 2020 - September 2020
- Worked on accurately predicting properties such as packaging, tropism, and transduction, to propose optimal AAV(viral) capsid DNA sequences, and building full scale machine learning infrastructural pipelines
 - Lead research to discover novel signal in improving packaging ability in AAV genetic sequence optimization
- Abelian AI**, *Co-Founder* November 2019 - November 2020
- Dorm room AI consulting that delivers end to end predictive systems
 - Worked on ML system design(e.g. recommendation systems), full stack integration and deployment of production level apps, as well as business development
- The Routing Company(formerly Rutable AI)**, *Software Engineer* May 2019 - September 2019
- Algorithmic development and implementation as an integral member of a ride hailing startup, helping reach a pre-seed round of over 1 million through the UFirst Accelerator.
 - Worked extensively with Golang, ReactJS, Kubernetes, Docker, InfluxDB, MongoDB and Microservices.
- Broad Institute - Regev Lab**, *Undergraduate Research* January 2019 - May 2020
- Working on unsupervised clustering in high dimensional subspaces to improve cluster overlap detection, with deep augmented Bayesian Inference mixture models.
 - Sparsification and enriching of co-variance matrices with VAEs to produce independence graphs which can detect casual relationships from latent spaces.
- Groove**, *Team Lead* January 2019
- A music suggestion service for friends built during a month long web programming competition.
 - Integrated Spotify Oath API. Node JS/MongoDB backend; ReactJS frontend

RESEARCH AND TALKS

- Chen, J.** Wallar, A. Van Der Zee, M. Hong, D. Chai, L. (2019). *UFirst Demo Day*, 2018, Boston, Massachusetts.
- Chen, J.** Xin, J. Todd, G. (2017). *Investigating Combination Therapy in Triple-negative Breast Cancer Using CRISPR + Drug Combo Perturbations.*, 2017, Cambridge, Massachusetts.

SKILLS

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|-----------------|--|
| Software | Python, Golang, ReactJS, Javascript, CSS, HTML, C++, \LaTeX |
| Math | Probability, Group Theory, Real Analysis, Linear Algebra, Discrete Math, Multivariable |
| Tooling | Pytorch, Kubernetes, Docker, MongoDB, Pandas, Numpy, HAIL, Scrapy |