Jeffrey Chen

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EDUCATION

Massachusetts Institute of Technology 4.8/5.0 GPA — Class of 2022

· Computer Science Major

· Courses Taken by Jun '21: **Inference and Information Theory**, Algorithms for Inference, **Cryptography**, **NLP**, Advanced Algorithms, Machine Learning, Probabilistic Systems, Computer Systems, **Quantum Physics**, **Cell Biology**, Web Programming, Real Analysis, Group Theory, Linear Algebra, Design Lab

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

· Working on multi-party homomorphic encryption system for secure Linear Mixed Model computation on GWAS(genomic data) written in Golang

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 - Present

· 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 Routable 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

Broad Institute - Golub Lab, *Wet Lab Intern* — June 2017 - July 2018

· Worked on drug combination synergy and identifying markers for brain metastases. Had extensive hands on experience with wet lab work, including tissue culture, PCR, and drug data analysis.

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

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, Scanpy