John Jeang

johnjeang@gmail.com ❖ (240) 271-6189 ❖ Cambridge, MA

EDUCATION

HARVEY MUDD COLLEGE, Claremont, CA	**August 2015 – May 2019**
Bachelor of Science, Physics	Cumulative GPA: 3.75

- **Honors:**
    - Graduation with High Distinction
    - Dean's List (all eligible semesters)
    - Physics Departmental Honors
- **Audited Courses:**
    - Algorithms
    - Material Engineering

HARVARD EXTENSION SCHOOL, Cambridge, MA	**September 2023 - Present**

Ongoing Coursework:

- Advanced Machine Learning, Data Mining, and Artificial Intelligence

RESEARCH EXPERIENCE

DANA FARBER CANCER INSTITUTE, Boston, MA	
Bioinformatics Analyst	**January 2022 – Present**

- Characterize tumors by cellular composition and biological pathways to understand possible therapeutic targets in pediatric brain tumors
- Analyses have led to two first author papers and contributing to three additional manuscripts
- Develop quantitative techniques for testing mechanisms of cancer development
- Lead Broad Institute Data Bootcamp to teach non-computational post-doctorate researchers fundamental data analysis techniques
- Manage data pre-processing pipeline to ensure quality control
- Use spatial transcriptomics to investigate how the tumor microenvironment affects gene expression
- Identify tumor genetic driver mutation at base-pair resolution

HARVEY MUDD COLLEGE, Claremont, CA	
Senior Capstone Clinic Project (in collaboration with HRL Laboratories)	**August 2018 – May 2019**

- Built algorithm to electrostatically tune quantum dots to make qubits for quantum computers
- Used deep reinforcement learning to set electrode voltages to confine electrons to potential wells

Lynn Lab	**January 2018 – May 2018**

- Simulated Q-plate with programmable Liquid Crystal Display (LCD) to explore quantum entanglement
- Designed experimental setup to study the orbital angular momentum (OAM) of a collection of photons using MATLAB to program custom filters

PUBLICATION & MANUSCRIPTS

- Prince, E., …, **Jeang, J.** et al., (submitted). Unraveling the Complexity of the Senescence-Associated Secretory Phenotype in Adamantinomatous Craniopharyngioma using Multi-Modal Machine Learning. *Neuro-Oncology.*
- Rendo, V., …, **Jeang, J.** et al., (in preparation). Surgical window of opportunity trial reveals mechanisms of response and resistance to navtemadlin in patients with recurrent glioblastoma
- **Jeang, J.**, et al., (in preparation). Resolving the genetic landscape of pediatric Adamantinomatous Craniopharyngiomas and the effects of a dense collagen microenvironment
- **Jeang**, J., Boisvert, M., Perera, A., Condurat, L., Novikov, D., Bandopadhayay, P., Beroukhim, R. (in preparation). Senescent microglia create tumor permissive environment for pediatric Low Grade Gliomas.
- Azazmeh, N., …, **Jeang, J.** et al., (in preparation). A-MYB/MYBL1 promotes states in neural cells: A novel actor in the CNS at the intersection of development and pediatric disease.
- Tsai, J., …, **Jeang, J.** et al., (in preparation). The effects of FOXR2 in pediatric brain tumors: a possible therapeutic target (working title).

PRESENTATIONS

- **Jeang, J.** (2023, April 4). Multimodal characterization of Adamantinomatous Craniopharyngiomas. 2nd Biannual joint retreat on brain tumor biology between Dana Farber Cancer Institute, Broad Institute, and McGill [Oral presentation]
- **Jeang, J.** (2023, December 11). Non-cell autonomous growth in Adamantinomatous Craniopharyngiomas stimulated by signaling interactions with the tumor microenvironment. PLGA retreat at the Dana Farber Cancer Institute. [Poster presentation]
- **Jeang, J.,** Boisvert, M. (2023, December 6). A cellular characterization of various pediatric Low Grade Glioma subtypes. [Oral presentation]

INTERNATIONAL CONFERENCE/SYMPOSIA ATTENDED

- 20th International Symposium on Pediatric Neuro-Oncology, Hamburg, Germany (June 12-15, 2022)
- 2nd DFCI-Everest Retreat on Pediatric Low-Grade Gliomas, Dedham, MA (November 11-12, 2022)
- Dana Farber Cancer Institute PLGA retreat, Boston, MA (December 11, 2023)

WORK EXPERIENCE

IMC FINANCIAL MARKETS, Chicago, IL   **August 2019 – March 2021**
Quantitative Trader
- Optimized automated trading system and adapted to dynamic market conditions
- Created predictive models for trading equities and ETFs using historical market data
- Synthesized news events and corporate actions to manage trading portfolio
- Analyzed risk and conducted "worst-case" simulations to evaluate the cost and benefits new trading strategies

JANE STREET CAPITAL, New York, NY   **May 2018 – August 2018**
Trading Intern
- Built automated trading bot, and manually traded in various scenarios including ETF creation/redemption, ADR arbitrage, and options on mock exchange
- Analyzed the effects of dividends on a stock's future trajectory

TEACHING

BROAD INSTITUTE, Cambridge, MA
Project Consultant for the Cancer Program Computational Bootcamp   February 2023
- Taught data analysis techniques and statistics to supplement biological experiments
- Led a team postdocs, without computational backgrounds, through a data analysis project
- Helped organize, troubleshoot, and run various departmental presentations

HARVARD COLLEGE, Cambridge, MA
Non-Resident Tutor   **September 2023 - Present**
- Guide Harvard undergraduate students through their course selection
- Provide insight into opportunities in sciences after college
- Provide academic and non-academic resources to support student success

BREAKTHROUGH HOUSTON, Houston, TX   **June 2017 – August 2017**
Chemistry Teacher
- Taught classroom-style lessons to underserved middle school students
- Created the curriculum and set up labs so the students could get hands-on experiences
- Constructed and taught a new elective on Alternative Energy
- Coached students on study habits and led regular parent-teacher meetings to discuss each child's strengths and weaknesses

NURTURING WISDOM, Woodridge, IL   **February 2020 – October 2022**
Math and Science Tutor
- Tutored college and high school level subjects including Vector Calculus, Mechanics, Electricity and Magnetism, and Organic Chemistry
- Promoted good study habits and make time management schedules for students
- Made custom lesson plans in in real-time to fit students' needs

HARVEY MUDD COLLEGE, Claremont, CA   **February 2017 – May 2019**
"Grutor" (Grader and Tutor)
- Graded homework and gave feedback (Discrete Mathematics, Special Relativity, Electricity and Magnetism, Quantum Physics)
- Tutored students in both office hour setting and privately

YANG ACADEMY**,** Rockville, MD   **August 2017**
Chemistry and Physics Teacher
- Taught accelerated high school students a 1-month course in Chemistry and Physics (4 hours per day)

WYZANT PRIVATE TUTORING, Remote **August 2021 – January 2022**
Private Tutor
- Tutored College students in advanced topics including Algorithms, Abstract Algebra, Statistics, and Differential Equations

CLUBS

BOSTON COMPUTING CLUB, Boston, MA **July 2023 – Present**
- Discuss computational topics via virtual presentations

VOLUNTEER COACHING AT MIT, Cambridge, MA **September 2023 - Present**
- Create workouts to prepare undergraduate swimmers for NCAA championships
- Provide technique consulting
- Help with swim meet logistics

MIT MASTERS SWIMMING, Cambridge, MA **February 2022 – Present**
- Practice and compete as part of a team for post graduates

LEADERSHIP AND SERVICE ACTIVITIES

CK JEANG'S PRIVATE ACADEMIC CONSULTING, Houston, TX **January 2021 – March 2022**
Special Education Tutor

- Tutored students with learning disability in math, science, and standardized test prep

HARVEY MUDD COLLEGE, Claremont CA **August 2015 – May 2019**
Varsity Men's Swim and Dive Team
- Served as Captain during the 2018-2019 season

Resident Life
- Campus mentor for the 2016-2018 academic years; mentors help freshman adjust to the college lifestyle

GENERATION Z, Rockville, MD **January 2014 – December 2014**
Volunteer Tutor
- Tutored young children in various subjects including reading, math, and even speaking English

TECHNICAL SKILLS & INTERESTS

- **Technical Skills**: Advanced Math topics including self-studying Algorithms, Complexity Theory, Abstract Algebra, Programming (Python, SQL, R, C++, JavaScript), Single-cell transcriptomics analysis, data integration, identification of single nucleotide polymorphisms
- **Language Skills**: Fluent in French
- **Interests**: Stand-up comedy, poker, game theory, teaching, mentoring, strategy games, swimming, running, tennis, weight lifting, rock climbing, and investing