REDX RESEARCH

INFO

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OUR MISSION

Our mission is to empower students with top-tier instructors, ensuring they excel academically and stand out in college applications. We're committed to providing expert-led programs that equip students with the skills and experiences needed for success in both academia and the professional world.

Empowerment Through Expertise

We believe in the power of exceptional instructors. Our commitment to excellence means partnering with top professors and industry experts to guide students towards outstanding college applications.

Letters of Recommendation

Have the opportunity to receive personalised recommendation letters penned by our professors. Consider it a stamp of approval for your intellectual prowess.

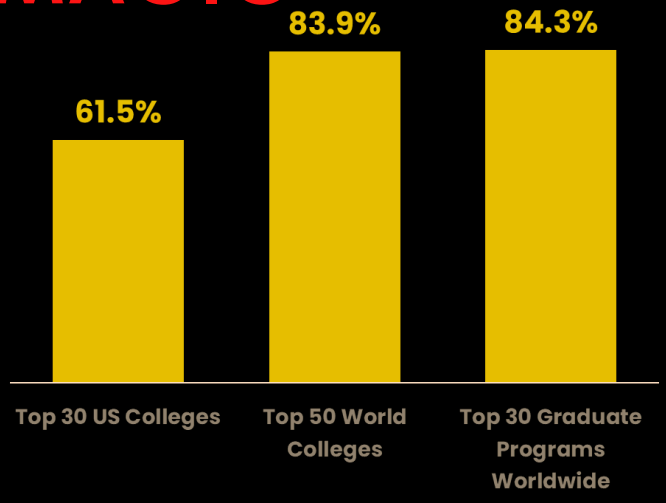
No more than 20 students per Research Course

We do not believe in profit maximisation. We put students at the centre of everything that we do.

By participating in our programs, students can receive not only guidance but also an endorsement from the best of the best in a panoply of fields, bolstering their college applications. Among students who have enrolled in our programs:

83.9% students have successfully been admitted to the top 50 QS-ranked

THE REDX MAGIC



School	Undergraduate admission	Master and PhD admission
Princeton University	1	1
MIT	3	5
Harvard University	2	4
Stanford University	2	4
Yale University	3	3
University of Chicago	4	5
University of Pennsylvania	4	19
Duke University	5	12
Brown University	4	13
Northwest University	6	10
Johns Hopkins University	12	61
Columbia University	5	42
Cornell University	7	16
UC Berkeley	19	9
UCLA	17	11
Rice University	12	7
Vanderbilt University	12	6
University of Notre Dame	4	2
University of Michigan, Ann Arbor	7	19
University of North Carolina at Chapel Hill	11	2
Georgetown University	5	14
Emory University	19	2
University of Virginia	5	4
Carnegie Mellon University	11	13
Washington University in St. Louis	17	43

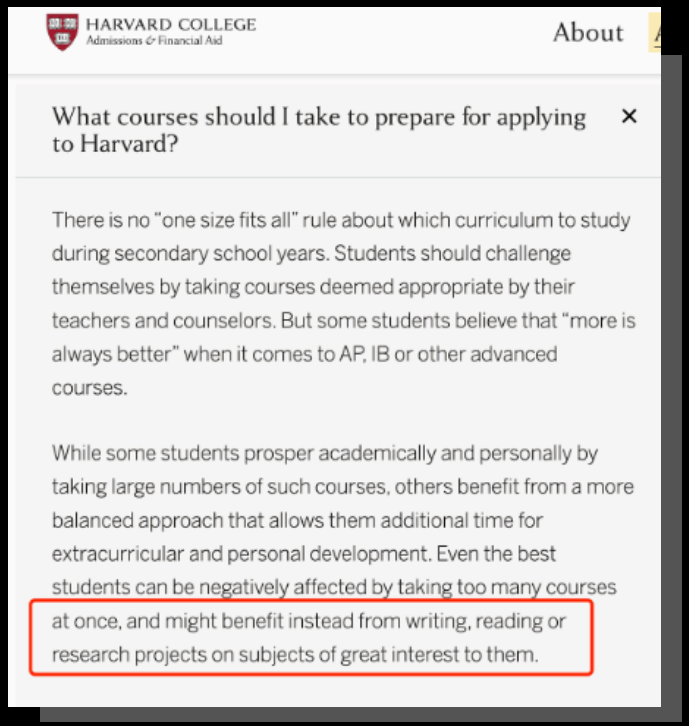
2023 US College Admission Results

(* Based on students' self report)

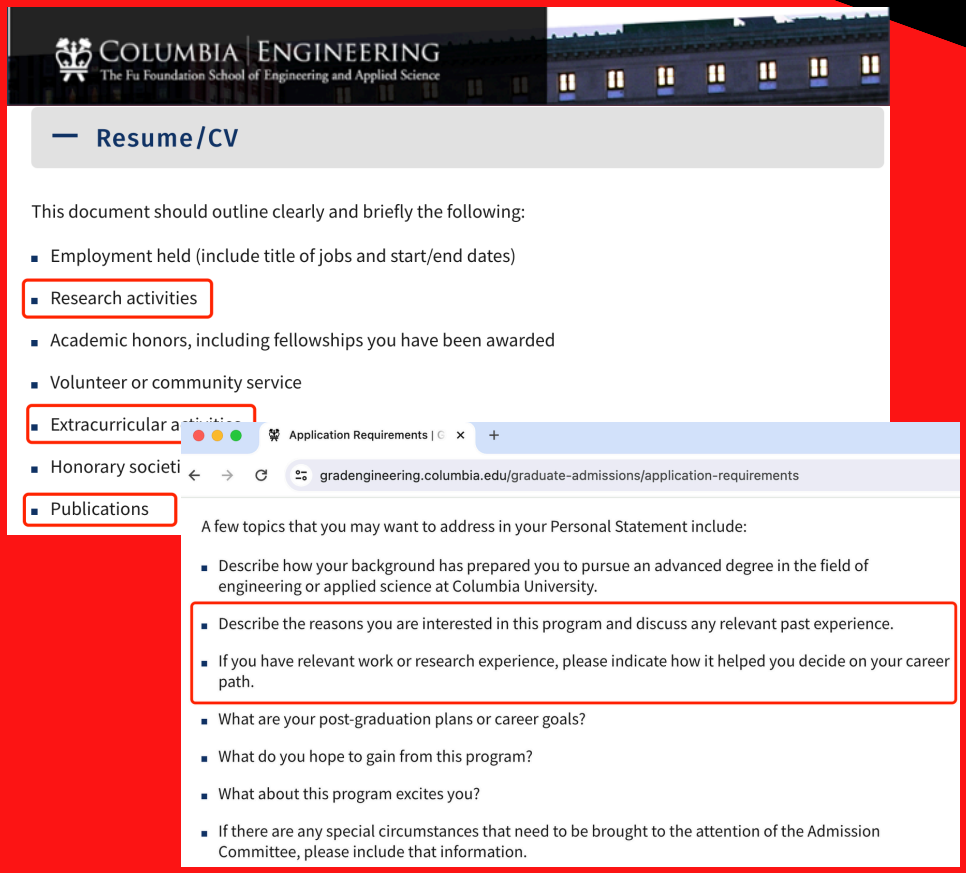
THE SECRET TO SUCCESS.

Research experience!

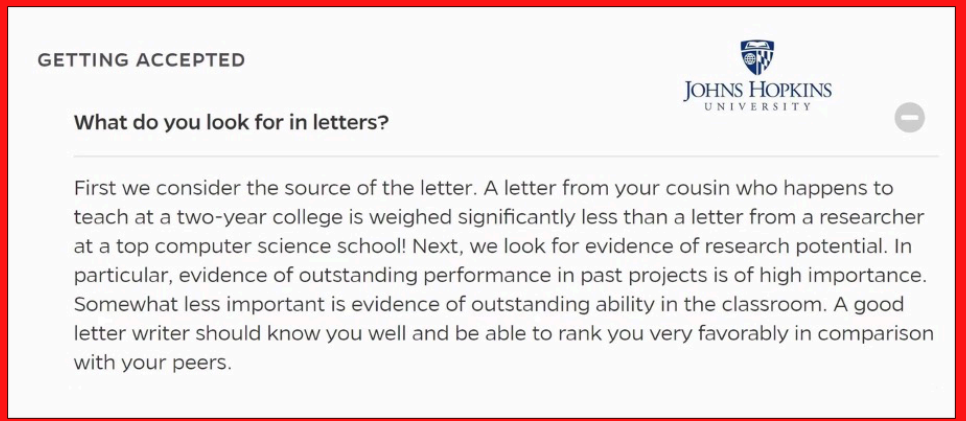
- Like Columbia and Harvard, **MOST** top universities **value research** undertaken by applicants.
- **Deep Research** in your area of interest is one of the best, if not the best way of showing admission officers that you are **truly interested** in what you seek to study.



According to their admissions page, Harvard does not encourage students to take an excessive number of courses at school. Instead, it advocates for a more balanced approach, such as engagement in research programs. Students are encouraged to submit their research findings as a component of their application to the university.



Johns Hopkins places an unbelievable emphasis on letters of recommendation. With RedX, students have the opportunity to receive a letter of recommendation from the best professors in their respective fields.



TANGIBLE OUTCOMES

Enriching Personal Statements

With an incessant influx of applicants with stellar grades, top universities have come to value passion more than grades. They often implicitly prescribe that applicants elaborate on academic endeavours outside of their educational institutions. In essence, they are looking for someone who goes beyond a set syllabi.

Work with Top Scholars

University of Pennsylvania:

"Nearly one-third of the admitted students engaged in academic research during their time in high school...worked alongside leading faculty and researchers in their fields of interest."

Penn Admissions — Learning at Penn

Nearly one-third of the admitted students engaged in academic research during their time in high school, many earning national and international accolades for research that is already pushing the boundaries of academic discovery. Admitted students worked alongside leading faculty and researchers in their fields of interest, co-authored publications included in leading journals, and displayed their ingenuity in making connections across complex and varied disciplines. Our faculty and fellow students across Penn's schools and research centers are ready to welcome this latest generation of dynamic scholars who will continue to create new knowledge to benefit the world.

Evaluation & Letter of recommendation

Students who participate in our programs will be **issued an evaluation by the professor. This is in tandem** with **opportunity to receive a letter of recommendation** primarily based on their research submission. These letters can greatly enhance students' college applications, making them stand out from the crowd.

Independent Research Program Student Evaluation

Subject: Linear Programming and Optimization
Independent Research

Professor:
Contact: @berkeley.edu
Date: October 31, 2023

Student Name: Swaroop

Research & Course Description	Swaroop undertook an in-depth research project on Linear Programming and Optimization, exploring advanced mathematical concepts and developing innovative programming solutions. The project included a comprehensive study of linear algebra, optimization techniques, and their applications in mathematical finance.
Topics Covered	• Fundamental concepts in linear algebra including linear combinations, independence, • rank, and subspace. • Introduction and standardization in optimization and linear programming. • Advanced techniques in quadratic programming and second-order cone programming. • Exploration of factor models in mathematical finance.
Course Objectives and Assignments	This intensive program required to master complex mathematical principles, develop advanced programming skills, and apply these to real-world optimization problems. The course aimed to foster a deep understanding of optimization theory and its practical applications in finance.

Independent Research Program Student Evaluation

Subject: The Economics of Corporate Disclosure

Professor
MIT Sloan School of Management,
100 Main Street, E62-666,
Cambridge, MA 02142

Student Name:

Research & Course Description	This course is designed to (i) give students a perspective of the economics of accounting (and more broadly, corporate disclosure) in the capital markets, (ii) introduce students to academic research, particularly related to corporate disclosure, and (iii) give students firsthand experience conducing independent research. To achieve the aforementioned objectives, this course is structured into three main modules: (i) An introduction of how financial statements are prepared and the role of discretion in financial reporting (ii) Agency theory and the need for accounting and disclosure, using examples of disclosure research, and (iii) A research project involving practical experience searching for US listed companies' financial statement and disclosures, and evaluating their earnings quality. The classroom approach is mainly discussion based. Students are required to turn-in one written research report related to the material covered in class and present their findings on the last day of class. Broadly speaking, students have to collect financial statements and disclosure data for a sample of companies and conduct statistical analyses to test their hypothesis.

Evaluation of

I have had the opportunity to closely interact with over a period of 8 weeks. Unlike other classes I have taught, my interactions with were one-on-one and thus I got to know her better than I typically get to know my students from larger classes. In short, I am very impressed with . She consistently displayed a high level of competence, dedication, and attention to detail, which highlighted her ambition and desire to learn.

My course is designed to help students get a primer into academic research and the primary means to evaluate students is based on their research project. research paper is entitled "Research on the Market Reactions to HFCAA: Beneficial or Detrimental to Investors." In this paper, she examines the economic implications of the Holding Foreign Companies Accountable Act (HFCAA), which threatens to delist Chinese companies cross-listed in on U.S. stock exchanges whose auditors could not be inspected by the U.S. audit regulator.

When she first approached me with her research proposal, I could see that she was genuinely interested in exploring the impact of HFCAA on Chinese companies listed on U.S. exchanges. Her initial inquiries revolved around whether HFCAA would enhance financial reporting quality or prompt Chinese companies to exit the U.S. market. Finally, her interests settled on examining investor reactions to this regulation. Besides formulating her hypotheses using concepts related to agency theory that we covered in class, she also did a though job in her empirical analyses. One especially notable accomplishment was her entrepreneurial approach to data collection using the Wharton Research Data Services (WRDS) platform. WRDS is commonly used platform to collect large amounts of data by more advanced research but typically not used by a novice. Overall, work ethic and maturity were evident in her approach to the project.

Evaluation of

I also want to add that is very professional. She always arrived on time for our meetings, and was organized and prepared. Specifically, she would come to our meetings with a list of thoughtfully prepared questions and updates on her research progress, taking a proactive approach to our discussions. Her level of preparation allowed our meetings to be very productive and efficient. Also, she attentively absorbed my comments and suggestions regarding her work and was able to incorporate them into revising her research project. Her openness to feedback and her willingness to make improvements highlight her commitment to learn for the sake of learning.

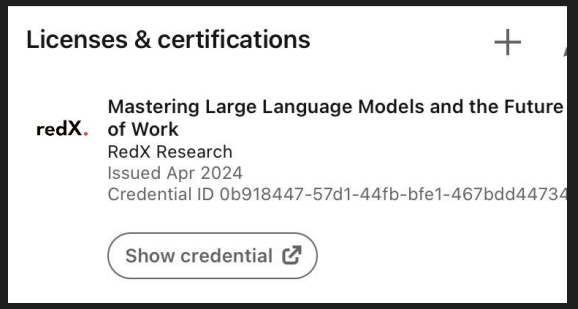
Overall, advising has been an enjoyable experience. Her professionalism, courtesy, and receptiveness to guidance have made our interactions seamless and productive. I have no doubt that exceptional qualities will continue to serve her well in her future academic and professional endeavors, and I wholeheartedly recommend her for any opportunities that come her way.

Based on final research paper and her overall performance, I will reward an A+ grade in my class.

Final Grade: A+

Coveted Certificates

After completing RedX programs, students will receive a certificate of completion. Our partnership with Certifier enables us to issue sleek and stylish certificates. Students may add the certificate to their LinkedIn.



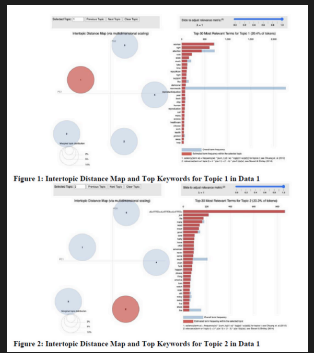
Licenses & certifications +

redX. **Mastering Large Language Models and the Future of Work**
RedX Research
Issued Apr 2024
Credential ID 0b918447-57d1-44fb-bfe1-467bdd44734

Show credential

Intensive Projects

Through our programs, students will engage in group research projects that consolidate their understanding of the course material and bring out the best of their abilities. These projects will serve as uncompromising supporting evidence of talent and commitment, whatever they are upto in the world of study and work.



Prof. Kyle Keane at MIT

- AI Research Scientist at MIT
- Senior Consultant at Ventus Executive Solutions, specializing in applied quantum technologies
- Research Programmer at Wolfram Research Inc., developed natural language processing algorithms
- Director of the Interactive Materials Education Laboratory (IMEL), fostering undergraduate research

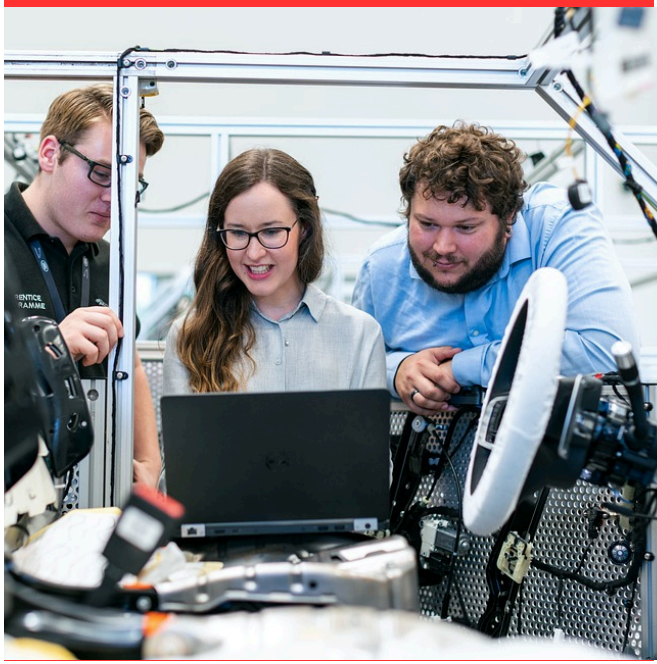
Your Instructor

"World-class AI technology expert with gift for simplifying things."

Uncovering the workings of Large Language Models

Why choose this course?

Artificial Intelligence (AI) and Machine Learning (ML) are revolutionizing the way decisions are made across various sectors. From automating routine tasks to providing deep insights into data, these technologies enable more efficient processes, enhanced accuracy, and the ability to scale decision-making capabilities. This course delves into the operations of the large language models as we know them: ChatGPT, Bing, Gemini. Students will probe into how LLMs are designed, developed and employed to present an easy-to-use product on our devices.



What you will learn:

The curriculum will cover fundamental concepts of natural language processing, the architecture and training methodologies of these models, techniques for fine-tuning and transfer learning, evaluation metrics for assessing model performance, ethical considerations in their deployment, and exploration of advanced multimodal models that work with not just language, but also image and audio generation.

Focus

- Data Science
- Predictive Analytics
- Statistical Modeling
- Decision-Making
- Project Management
- Computational Prototyping
- Leadership in AI Implementation
- Artificial Intelligence and Machine Learning

Week	Professor's Live Class	Mentor's Live Class
Week 1	• Definition of Large Language Models. • Overview of LLM workings, applications and implications.	1-hour lecture support
Week 2	• The Fundamentals of NLP: tokenization, word embeddings, language modeling.	1-hour lecture support
Week 3	• Understanding how large language models are trained, including architectures like Transformer and GPT.	1-hour lecture support
Week 4	• Techniques for adapting pre-trained models to specific tasks. • BERT architecture and pre-training objectives.	1-hour lecture support
Week 5	• How the performance of language models is measured and evaluated.	1-hour lecture support
Week 6	• An Introduction to mulitmodal models and large-scale training methodologies	1-hour lecture support
Week 7	• Deep dive into Multimodal Models with a focus on OpenAI's Sora.	1-hour lecture support
Week 8	Professor Keane helps you identify a thesis for research and assigns preliminary readings.	1-hour Research mentorship
Week 9	Meet with Group to discuss shared research project.	1-hour Research mentorship
Week 10	Meet with Group to discuss shared research project.	1-hour Research mentorship
Week 11	Group Research Presentation; evaluated by the Professor.	1-hour Research mentorship

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TEXTS/READING FOR THIS CLASS:

- Deep Learning" by Ian Goodfellow, Yoshua Bengio, and Aaron Courville.
- "Natural Language Processing with Python" by Steven Bird, Ewan Klein, and Edward Loper.
- "Attention is All You Need" by Ashish Vaswani et al. (for understanding Transformer architecture).
- "Bias in Natural Language Processing" by Emily M. Bender and Batya Friedman.
- "BERT: Pre-training of Deep Bidirectional Transformers for Language Understanding" by Devlin et al., 2018 (explains BERT architecture and pre-training objectives).

*They will be available on your portal.

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