The online research academy that connects driven high-school students with expert academic mentors to pursue tailor-made research projects.

www.polygence.org
About Polygence

Polygence is a Stanford- and MIT-founded online research academy. We pair intellectually curious students with expert mentors to pursue personalized research projects. Under the guidance of their mentors, Polygence students engage in academic fields across the STEM, the social sciences, and the humanities to produce showcase-able final projects. Throughout the entire mentorship process, Polygencers learn to take their potential college majors on a test drive.

Passion Projects

• Publish a paper
• Present at conferences
• Launch your app
• Produce a podcast
• Write a novel

Expert Mentors

• Connect with researchers at your dream school
• Receive personal feedback and advice from top academics
• Insider tips on research positions

College Readiness

• Test drive your college major
• Stand out from the crowd and distinguish yourself
• Get a headstart in academic writing and applying the scientific method

Personalized Program

• Flexible scheduling
• Any discipline
• Online from anywhere
Polygence Team

Jin Yun Chow
Founder and Program Director

Education
Stanford University, Ph.D. candidate
Comparative Literature
Princeton University, Valedictorian
Comparative Literature

Expertise
Reading, Creative Writing, Literary Analysis,
French Literature, Chinese Literature, Comparative Literature, Cultural Studies

Janos Perczel
Founder and Program Director

Education
MIT, Ph.D. (2018)
Quantum Physics
Cambridge University, MA.St. (2012)
Applied Mathematics
University of St Andrews, B.Sc. (2011)
Physics, Logic and Philosophy of Science

Expertise
Quantum Computing, Invisibility cloaking,
Logic & Philosophy

Staci Hill
Head of Academics

Education
Yale University, M.Sc. (2019)
Chemistry
St. John’s College, M.A. (2017)
Liberal Arts
Chemistry

Expertise
Nutritional Chemistry, Graphical Visualization,
Philosophy of Science

Charlotte Werbe
Director of Admissions and Projects

Education
Princeton University, Ph.D. (2018)
French Literature
University of Massachusetts, M.A. (2012)
French Literature
Mount Holyoke College, B.A. (2010)
Education, French Literature

Expertise
Testimony studies, Memory studies, Media studies,
Comics & Graphic novels, French & Francophone literature
Mentor Spotlight

Deborah O.
MD (2020)

Education
Yale-New Haven Health (2020 - Current)
Resident Physician, Internal Medicine
Duke University, MD (2020)
Medicine
Yale University, BA (2015)
Psychology/Neuroscience

Subjects
Biology, Social Sciences

Expertise
Psychology, Neuroscience, Pre-Medical Studies, Health & Medicine

Anav S.
Ph.D. Candidate

Education
Stanford University, PhD candidate
Statistics
Stanford University, MS (2020)
Statistics
Stanford University, BS (2020)
Mathematics

Subjects
Math, Computer Science

Expertise
Machine Learning, Data Science, Quantitative Modeling, Statistics, Mathematics

Becca S.
J.D. (2020)

Education
Teach for America (2015 - 2017)
Corps Member
Yale Law School J.D. (2020)
Law
Yale College B.A. (2020)
History

Subjects
History, Law

Expertise
American law, Education, American history, Women's rights

Subjects include
history, biology, neuroscience, computer science, literature, economics, law, music, architecture, data science, web development, psychology, business, finance, theater, playwriting, and many more.
Mentor Spotlight

Brad S.
Ph.D. Candidate

Education
University of Michigan
PhD candidate
Robotics
Carnegie Mellon
MS (2017)
Robotics
Caltech, BS (2012)
Mechanical Engineering

Subjects
Physics, Math, Engineering, Computer Science, Robotics

Expertise
Robotics

Anna Jayne K.
Ph.D. Candidate

Education
Stanford University (2018–)
PhD Candidate
Theater and Performance Studies
French and Italian

Subjects
Creative Writing, History, Fine Arts

Expertise
Performance Studies, Critical Dance Studies, Anthropology, Ethnography, Arts and Justice

Michael W.
Ph.D. Candidate

Education
University of Chicago
(2013 - 2015)
Research Assistant
MIT
PhD candidate
Economics
Harvard
AB (2019)
Physics

Subjects
Social Sciences, Economics

Expertise
Economics

80% of students say their Polygence experience influenced what they’d like to study in college or do in their career

10+ hours of one-on-one individual attention in a project and topic of your choosing
Complete online application. If your application is promising, we will get in touch to schedule an interview.

Interview (10 min) with program coordinators to evaluate your background, learn about you and match you with a mentor.

10 one-to-one (60 min) sessions with your mentor over a period of 2-6 months:

**Introduction** (1 session):
- Discuss project, learning goals and creative end product

**Foundations** (2 sessions):
- Cover necessary background via guided readings and in-depth reviews

**Exploration** (3 sessions):
- Explore problem and innovative solutions
- Complete introductory hands-on tasks

**Execution** (3 sessions):
- Implement cutting-edge research methods
- Complete independent work and creative product

**Presentation** (1 sessions):
- Present results, lessons learned, future horizons

10 written session reports sent after each session. 1 mid-program progress report sent after session 5.

**Letter of Recommendation** will be awarded to students exhibiting outstanding performance throughout the mentorship process.

Students with ambitious long-running projects may opt to extend their Polygence program with additional sessions.
Current Polygence Projects

**Analyzing the Framing of 2020 Presidential Candidates**

In this project the student is wrote a research paper on the manifestations of gender bias in the language used by US politicians. The student is learning and applying Artificial Intelligence algorithms and Natural Language Processing tools to analyze large data sets.

**Dora**
Stanford, Ph.D.

**Stochastic Simulations of COVID-19 Community Spread**

The student explored fundamental techniques in bioinformatics and learned about the process of writing a scholarly paper. Using computational methods, she coded stochastic simulations to ask: how is the community spread of a virus affected by herd immunity?

**Fabian**
Stanford, Ph.D.

**Foggy Minds: A Podcast on Dementia**

This podcast aims to explore the neuroscience behind our memories. By using case studies, experiments, and numerous academic sources, this podcast attempts to explain how memories are affected by neurological disorders like amnesia.

**Deborah**
Yale, MD

**The Science of Invisibility Cloaks**

This project focused on the use of transformation optics and metamaterials – with the goal to understand how optical devices hide objects and make them invisible. The student studied and worked on optimizing the refractive index profiles of invisibility cloaking devices.

**Janos**
MIT, Ph.D.
Current Polygence Projects

Publishing in the High School Journal of Law and Society

The student studied Supreme Court rulings and published an article focusing on the rights of the LGBTQ+ community. His piece investigates the 14th Amendment of the U.S. Constitution and Supreme Court cases with the aim to promote acceptance of the LGBTQ+ community.

Emily
Stanford Law, J.D.

Political Polarization in America

The student explored the idea of political polarization in America, worked with his mentor to study and discuss the ideas permeating politics, and wrote a series of opinion editorials. One of which, he and his mentor co-authored and published together.

Chang
Oxford, MPhil

BLOG

The Polygence Project: Giving you an Edge in College Admissions

Read more on our blog at www.polygence.org/blog

Contact us for a consultation!

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