

Application for Graduate Study

Applicant Name	Applicant ID
Yahriel Salinas-Reyes	619715613
Degree Program	Entry Term
Neurosciences (PhD) Biomedical Data Science (PhD)	Autumn 2024-2025

This application preview is for your records only.
Do not send this document by mail as your application.

Personal Background

Name

Full Name	Chosen First Name	Pronouns
Yahriel Salinas-Reyes	Yahriel	He/him

Contact Information

Email Address	Primary Phone	Mobile Phone
yahrielsreyes@gmail.com	+1 515-314-4160	
Mailing Address	Permanent Address	
1709 E Walnut St Des Moines, IA 50316-3655 United States	1709 E Walnut St Des Moines, IA 50316-3655 United States	

Biographical Information

Birthdate	Birthplace	First Spoken Language
11/11/2000	Des Moines, IA, United States	American Sign Language
Sex	Gender Identity	
Male	Man	
Primary Citizenship	Secondary Citizenship	
United States	Mexico	U.S. Permanent Resident

(Your responses to Race/Ethnicity will not be displayed to the admission committee.)

Race/Ethnicity	<input checked="" type="checkbox"/> Hispanic	<input checked="" type="checkbox"/> American Indian/ Alaska Native	<input type="checkbox"/> Asian	<input type="checkbox"/> Black/African American	<input type="checkbox"/> Native Hawaiian/ Pacific Islander	<input type="checkbox"/> White
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Military Status

Additional Languages	Reading Fluency	Writing Fluency	Speaking Fluency
English	Fluent	Fluent	Fluent
Spanish	Fluent	Fluent	Fluent

Please indicate the highest level of education completed by any of your parent(s)/guardian(s) while you were growing up.

Secondary / high school education

Additional Background

Were or currently are homeless, as defined by the McKinney-Vento Homeless Assistance Act. Were eligible for the Federal Free and Reduced Lunch Program for two or more years. Were or currently are eligible for Federal Pell grants. Received support from the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) as a parent or child. Grew up in a U.S. rural area, as designated by the Health Resources and Services Administration (HRSA) Rural Health Grants Eligibility Analyzer OR one of the Centers for Medicare and Medicaid Services-designated Low-Income and Health Professional Shortage Areas.

My commitment to global collaboration positions me as a bridge-builder between cultures, valuable in anthropology, transdisciplinary research, and beyond as a citizen of USA, Mexico, & El Salvador.

Academic History

Primary Undergraduate Institution

1	Institution		Location	
	Iowa State University		Ames, IA	
	Level of Study	Dates Attended	Degree	Degree Date
	Undergraduate	08/2019 - 12/2023	Bachelor of Aerospace Engineering	12/2023
	Major		GPA	GPA Scale
	Aerospace Engineering		3.4	4

Additional Post-Secondary Institutions

2	Institution		Location	
	Level of Study	Dates Attended	Degree	Degree Date
	Major		GPA	GPA Scale

3	Institution		Location	
	Level of Study	Dates Attended	Degree	Degree Date
	Major		GPA	GPA Scale

4	Institution		Location	
	Level of Study	Dates Attended	Degree	Degree Date
	Major		GPA	GPA Scale

5	Institution		Location	
	Level of Study	Dates Attended	Degree	Degree Date
	Major		GPA	GPA Scale

Academic History Questions Explanations, if any, will be displayed on the following page.

Have you ever been suspended, dismissed, or placed on enforced leave from any college, university, or post-secondary institution or been the subject of disciplinary action by such an institution?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Have you ever been placed on academic probation by any college or university?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Academic History

Academic History Questions

Have you ever been suspended, dismissed, or placed on enforced leave from any college, university, or post-secondary institution or been the subject of disciplinary action by such an institution?

Have you ever been placed on academic probation by any college or university?

If applicable, please provide an explanation of any gaps on your transcript indicating time away from your post-secondary institution(s) or program(s).

As I was born with deafness & alogia with undocumented immigrant refugee parents, my journey has been marked by the challenges of ADHD, PTSD, Anxiety, Autism, and Beyond. These neurological complexities, instead of hindrances, have fueled my academic pursuits; As I overcame, I found my voice (Bilingual). Throughout my academic journey, I danced on the edge of madness, where imagination and practicality intertwined. Occasionally, sensory wonder and chaos enveloped me, leading to profound insights into the world. My blend of scientific rigor and artistic sensibility. My experiences have shaped my academic journey and aspirations. I am passionate about fractal mathematics and its parallels with the complexity of the human mind.

You may use the space below if you would like to provide further contextual information about any aspect of your transcript, e.g., the impact of the COVID-19 pandemic or other personal experiences on your educational opportunities or achievements.

Formidable challenges & barriers have shaped my path. From early neurological & neurodevelopmental hurdles to external obstacles like financial difficulties, language barriers, health issues, & caregiving responsibilities, my journey has been marked by adversity. Yet, my response to these challenges has been remarkable. I embraced my unique identity & unwavering belief in the world's inherent goodness. I continued to read voraciously, seeking hidden truths even in seemingly flawed books. I've adhered to a strict code of chivalry, bridged language gaps through translation, & found solace in poetry, music, and science-art fusion. To the core, I've discovered my true self, a living testament to the boundless-curious human spirit & ingenuity.

Copy

IOWA STATE UNIVERSITY

Unofficial Transcript

Iowa State University

Current Student Information

SALINAS-REYES YAHRIEL

Curr/Major: AER E

College: Engineering

Unofficial Undergraduate Transcript

Iowa State University

FALL 2019 SEMESTER

TRANSFER CREDITS ACCEPTED FROM

DES MOINES AREA COMM COLL-WEST (DMACC)

YEARS OF ATTENDANCE: 2017-2019

HIST 221	4.0	
HIST 222	4.0	
MATH 165	5.0	R
POL S 215	3.0	
SP CM 212	3.0	
SPAN 201	4.0	
SPAN 202	4.0	

TECHNICAL CREDITS ACCEPTED

EGT 0V01	3.0
EGT 0V02	3.0

TRANSFER CREDITS ACCEPTED FROM

ADVANCED PLACEMENT EXAMS

DATE OF ATTENDANCE: SPRING 2019

SPAN 101P	4.0
SPAN 102P	4.0
TOTAL TECHNICAL CREDITS	6.00
TOTAL TRANSFER CREDITS	41.00

ADMITTED AS A SOPHOMORE

ADMITTED TO DEGREE PROGRAM IN AER E

FALL 2019

AER E 160H	HONORS AER ENG PROB	3.0	A-	H
CHEM 167	ENGNRS GENERAL CHEM	4.0	A-	
ENGL 150	CRITCL THINK&CMUNIC	3.0	T	
ENGL 250H	HONORS WRI,ELE COMP	3.0	B+	H
ENGR 101	ENGINEERING ORIENTN	R	S	
ENGR 104	LEAD PROGRM ORIENTN	1.0	S	
HON 121	FIRST-YR HONORS SEM	1.0	S	H
LIB 160	INFORMATN LITERACY	1.0	S	
MATH 165	CALCULUS I	4.0	A-	
MUSIC 113	JAZZ ENSEMBLE	1.0	X	

	TERM:	Cred Hrs	Qpts	GPA	Trnsf Hrs
		14.0	50.36	3.60	41.00
	CUM:TOT HRS	56.0	14.0	50.36	3.60
				3.60	41.00

SPRING 2020 SEMESTER

AER E 161H	HONOR NUM&GRPH TCNQ	3.0	A	
AER E 192H	HONOR AEROSPC SEMNR	R	S	H
ENGR 105	LEAD PROGRM SEMINAR	1.0	S	
HON 290H	SPECIAL PROB HONORS	2.0	S	H
MATH 166	CALCULUS II	4.0	A	
PHYS 221H	HONORS-CLASSIC PH I	5.0	A	H

PHYS 211	INTR U.S. LATINO ST	3.0	A				
		Cred Hrs		Qpts	GPA	Trnsf Hrs	
TERM:		15.0		60.00	4.00	0.00	
CUM:TOT HRS	74.0	29.0		110.36	3.81	41.00	

FALL 2020 SEMESTER

TRANSFER CREDITS ACCEPTED FROM
IOWA WESTERN COMMUNITY COLLEGE (IWCC)

DATE OF ATTENDANCE: SUMMER 2020

PHYS 232		4.0					
PHYS 232L		1.0					
TOTAL TRANSFER CREDITS		5.00					
AER E 261	INTRO PERFRMNC&DSGN	3.0	B-				
C E 274	ENGINEERING STATICS	3.0	C-	R			
HON 321L	HOW & WHY WE COUNT	1.0	S	H			
HON 321N	ENTREPRENEURSHIP	1.0	S	H			
MAT E 273	PRIN MATRLS SCI&ENG	3.0	C				
MATH 265	CALCULUS III	4.0	B				
		Cred Hrs		Qpts	GPA	Trnsf Hrs	
TERM:		13.0		31.02	2.39	5.00	
CUM:TOT HRS	94.0	42.0		141.38	3.37	46.00	

SPRING 2021 SEMESTER

AER E 362	AEROSPC SYS INTEGRT	3.0	B+				
E M 324	MECHAN OF MATERIALS	3.0	C				
MAT E 490C	INDEPENDENT STUDY	2.0	A				
MATH 267	DIFF EQ & TRANSFMS	4.0	A				
US LS 323C	TOP LAT AM RACE,CLS	3.0	A				
		Cred Hrs		Qpts	GPA	Trnsf Hrs	
TERM:		15.0		51.99	3.47	0.00	
CUM:TOT HRS	109.0	57.0		193.37	3.39	46.00	

FALL 2021 SEMESTER

AER E 310	AERODYNAM I:INCMPRS	3.0	C+				
AER E 321	FLIGHT STRUCT ANALY	3.0	B+				
AER E 494	MAKE TO INNOVATE II	2.0	A				
M E 231	ENGR THERMODYNAMICS I	3.0	B				
M E 345	ENGINEERING DYNAMICS	3.0	B-				
U ST 301	MCNR:INTRO TO RES I	2.0	A-				
		Cred Hrs		Qpts	GPA	Trnsf Hrs	
TERM:		16.0		49.33	3.08	0.00	
CUM:TOT HRS	125.0	73.0		242.70	3.32	46.00	

SPRING 2022 SEMESTER

AER E 311	AERODYN II:CMRPSBL	3.0	A				
AER E 322	AEROSPC STRUCTR LAB	2.0	B+				
AER E 344	AERODYN&PROPULS LAB	3.0	A				
AER E 351	ASTRODYNAMICS I	3.0	A-				
AER E 355	AIRCRAFT FLI DYN&CTL	3.0	C+				
AER E 361	COMP TECHNQ AER DSN	3.0	F	R			
		Cred Hrs		Qpts	GPA	Trnsf Hrs	
TERM:		17.0		48.66	2.86	0.00	
CUM:TOT HRS	139.0	90.0		291.36	3.24	46.00	

FALL 2022 SEMESTER

AER E 331	FLGHT CONTROL SYS I	3.0	B				
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AER E 361 COMP TECHNQ AER DSN 3.0 B+ #
AER E 421 ADV FLIGHT STRUCTRS 3.0 B
C E 274 ENGINEERING STATICS 3.0 C+ #
ENGL 309 PROPOS&RPRT WRITNG 3.0 A-
HSP M 383 WINE&SPIRITS HSP M 2.0 NP <

	Cred Hrs	Qpts	GPA	Trnsf Hrs
TERM:	15.0	45.99	3.07	0.00
CUM:TOT HRS	151.0	99.0	3.36	46.00

SPRING 2023 SEMESTER

AER E 301 FLIGHT EXPERIENCE R F
AER E 411 AERO VEHIC PROPULSN 3.0 C-
AER E 452 INTRO SYS ENG&ANALY 3.0 A
AER E 461 MOD DESIGN METHODOL 3.0 D+
AER E 490B IND STDY PROPULSION 3.0 A
STAT 305 ENGINEERING STAT 3.0 B-

	Cred Hrs	Qpts	GPA	Trnsf Hrs
TERM:	15.0	41.01	2.73	0.00
CUM:TOT HRS	166.0	114.0	3.28	46.00

Cumulative Summary

166.0	114.0	373.35	3.28
TOTAL HRS	ISU CUM HRS	ISU CUM QPTS	ISU CUM GPA

End of Unofficial Undergraduate Transcript

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Unofficial

Unofficial

1

Date Displayed September 21, 2023 04:37 AM

***** END OF RECORD *****

EXPLANATION OF SPECIAL SYMBOLS:

- R - GRADE SUPERSEDED BY A LATER GRADE
- # - COURSE REPEATED
ONLY THE MOST RECENT GRADE USED IN CUMULATIVE TOTALS
- < - COURSE TAKEN UNDER PASS-NOT PASS OPTION
- * - GRADE FOR PREVIOUS INCOMPLETE
NOT INCLUDED IN TERM TOTALS
- H - HONORS COURSE
- N - GRADE NOT YET REPORTED

UNOFFICIAL TRANSCRIPT

Iowa State University

Research Experience

1

Organization Name	Location	Dates of Experience
Iowa State University	Ames, IA	08/2019 - 05/2022
Position/Title	Principal Investigator	Hours/Week
Undergraduate Researcher / Systems Engineer	Dr. Martin Thuo	15
Description Collaborated on designing multi-function 3D piezoelectric devices for aeronautical applications. Explored tunability, sensitivity, and utility of paper-based devices, optimized designs, and assisted in the development of a self-automated calibration and data capture system. Contributed to the submission of research work to a scientific peer-review journal.		

2

Organization Name	Location	Dates of Experience
DARPA (Defense Advanced Research Projects Agency)	Ames, IA	08/2021 - 08/2023
Position/Title	Principal Investigator	Hours/Week
Undergraduate Research Assistant	Dr. Thomas Ward II	20
Description Conducted experimental techniques for flow separation detection and chemical sintering. Operated as an Experimental Engineer, designed hardware-software components, and contributed to the manufacturing of MEMS nanocomposites. Developed a semi-empirical model for deformation mechanisms, enabling FEA and Euler Theory. The research work was submitted for publication in 2023.		

3

Organization Name	Location	Dates of Experience
Greer Group, Caltech Country: United States	Pasadena, CA	05/2022 - 08/2022
Position/Title	Principal Investigator	Hours/Week
Summer Undergraduate Research Fellow	Dr. Julia R. Greer	40
Description Investigated hybrid nanocomposites and their semi-empirical method of viscoelastic behavior. Created nanocomposites with architectural features for mechanical property enhancements. Developed a model for deformation mechanisms, informing FEA and Euler Theory. The research work contributed to the understanding of viscoelastic continuum damage models.		

Research Experience

4

Organization Name	Location	Dates of Experience
Boeing Research in Excellence & Tech. Fellowship	Ames, IA	08/2021 - 08/2022
Position/Title	Principal Investigator	Hours/Week
Research Fellow	Dr. Thomas Ward II	20
Description		
Characterized damping mechanisms in piezoelectric wind-energy harvesters. Designed and fabricated a low-cost force sensor for green technology exploration. Explored pathways for aeronautical data collection and submitted research progress reports to Boeing. The research work was submitted for publication in 2023.		

5

Organization Name	Location	Dates of Experience
Zheng Research Group, Stanford University	Stanford, CA	05/2021 - 08/2021
Position/Title	Principal Investigator	Hours/Week
Summer Undergraduate Research Fellow	Dr. Xiaolin Zheng	30
Description		
Explored machine-learning techniques for scientific methods and prediction. Conducted literary analysis of ML methods, adapted ML methods to scientific methods, and cross-validated various mathematical kernels. Presented findings in the optimization of experimental design for scientific discovery.		

6

Organization Name	Location	Dates of Experience
IINSPIRE-LSAMP Scholars Achievement Program	Ames, IA	08/2019 - 09/2020
Position/Title	Principal Investigator	Hours/Week
Undergraduate Research Certificate Recipient	Dr. Martin Thuo	10
Description		
Synthesized meta-stable particles and high-efficiency paper-based MEMS sensors. Explored modern applications of research, prepared a literary review. Design of Multi-Function 3D Piezo-electric Devices for Aeronautical Applications," exploring tunability and utility of paper-based devices, optimizing designs, and assisting graduate students with SolidWorks and systems engineering.		

Research Experience

Have you participated in any Stanford summer research or graduate preview programs?

Summer Undergraduate Research Fellowship (SURF) in Engineering

Other - please specify:

What year(s) did you participate?

2021

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Publications / Presentations / Posters

1	Type	Title		Date
	Conference Article	"Advances & Opportunities in Paper-Based Piezoresistors (QTC's): Navier-Stokes Equations with Analytical-Geometrical Monte-Carlo Method"		
	Authors/Presenters Yahriel Salinas-Reyes, Dr. Thomas Ward			
	<input checked="" type="checkbox"/> Peer-reviewed	Journal/Conference/Event Title	Status	PMID
	<input checked="" type="checkbox"/> First-author	National Conference of Undergraduate Research	Submitted	
2	Type	Title		Date
	Journal Article	"Shear-Sensing Principals of Interfacial Viscous-Shear Flow and Piezomobility—strain-induced mobility—at The Wall (Thermal Boundary)"		
	Authors/Presenters Yahriel Salinas-Reyes, Dr. Thomas Ward, Dr. Martin Thuo			
	<input checked="" type="checkbox"/> Peer-reviewed	Journal/Conference/Event Title	Status	PMID
	<input checked="" type="checkbox"/> First-author	Applied Physics Journal: Viscous Flow	Submitted	
3	Type	Title		Date
	Presentation	"Hybrid Nanocomposites: Semi-Empirical Method of Viscoelastic Behavior"		08/2022
	Authors/Presenters Yahriel Salinas-Reyes			
	<input type="checkbox"/> Peer-reviewed	Journal/Conference/Event Title	Status	PMID
	<input type="checkbox"/> First-author	Caltech SURF Research Symposium		
4	Type	Title		Date
	Journal Article	"Characterizing Damping Mechanisms in Piezoelectric Wind-Energy Harvesters"		
	Authors/Presenters Yahriel Salinas-Reyes, Abhinaya Raghothaman, Lawrence D. Little, Dr. Thomas Ward, Dr. Martin Thuo			
	<input checked="" type="checkbox"/> Peer-reviewed	Journal/Conference/Event Title	Status	PMID
	<input checked="" type="checkbox"/> First-author	Applied Physics Journal: Journal of Vibrations	Under Review	
5	Type	Title		Date
	Poster	Insights of Machine-Learning Techniques for Scientific Methods & Prediction"		08/2021
	Authors/Presenters Yahriel Salinas-Reyes			
	<input type="checkbox"/> Peer-reviewed	Journal/Conference/Event Title	Status	PMID
	<input type="checkbox"/> First-author	Stanford SURF Lightning Talks		

Awards and Honors

1	Award Name	Date Received
	Inductee of The Order of the Engineer Honor Society for Engineer	11/2023
	Description The Order of the Engineer is an honor society for engineers graduating awarded by the Engineering Student Council. The Order of the Engineer is known for promoting a sense of pride and camaraderie among engineers, and also encourages engineers to continue learning and serving their communities.	
2	Award Name	Date Received
	Micro-g Neutral Buoyancy Experiment Design Teams (NExT)Challenge	12/2022
	Description To encourage innovation & creativity in developing experiments that can contribute to scientific knowledge and tech. Our design was utilized by astronaut-scientists in NASA's Mission to the Moon and Mars and displayed at the Houston exhibition -- Inner Space: NASA's Path to the Moon and Mars(2022)!	
3	Award Name	Date Received
	The Barry Goldwater Scholarship Foundation Finalist	10/2021
	Description A highly selective award for students with exceptional academic performance and demonstrated leadership potential. The foundation is committed to fostering the next generation of scientists, engineers, artists, and scholars. As a finalist, I demonstrated these traits and notable leadership potential	
4	Award Name	Date Received
	The Ronald E. McNair Postbaccalaureate Achievement Program Schol	08/2021
	Description The Ronald E. McNair Postbaccalaureate Achievement Program provides support to underrepresented individuals pursuing graduate studies in STEM fields. Eligible students must have completed their undergraduate studies and have a strong GPA & demonstrate potential for research & academic excellence.	
5	Award Name	Date Received
	Undergraduate Research Certificate Recipient	08/2021
	Description The requirements for obtaining an Undergraduate Research Certificate can vary depending on the institution, at Iowa State University this included participating in a research project, attending workshops and seminars, and submitting a written research paper or presentation.	
6	Award Name	Date Received
	The Youth Leadership Community Award: Iowa Dept. of Human Rights	07/2020
	Description Presented by the Iowa Department of Human Rights to recognize young individuals who have made significant contributions to their communities through youth leadership roles (200 hours) and have demonstrated a commitment to community service, leadership development, and civic engagement in Iowa.	

Work Experience

1

Organization Name	Location	Dates of Experience
The Microscale & Interfacial Fluid Physics Lab	Ames, IA	08/2021 - 08/2023
Position/Title	Industry	Hours/Week
Experimental Systems Engineer, UndergradResearcher	Technology	20
Description		
Research Project: "Experimental Techniques for Flow Separation Detection and Chemical Sintering" Operated as Experimental Engineer and composed an SOP for experiments and heavy machinery. Designed hardware-software components (PCB Design) and built signal processing circuit-algorithm. Manufactured MEMS nanocomposite and developed computations to model shear-viscosity at the thermal boundary for the Navier-Stokes Equations		
Reason for Leaving		
Private Investigator left University		

2

Organization Name	Location	Dates of Experience
Iowa State University	Ames, IA	08/2019 - 05/2023
Position/Title	Industry	Hours/Week
Information Technology Specialist and Data-Science	Technology	20
Description		
Led the implementation, monitoring, and maintenance of IT computer systems. Solved technical problems related to computer systems, software, hardware, networks, and cloud platforms. Utilized SQL, JAVA, Python, C/C#/C++ programming, Linux OS, AWS Services, SAS, and BASH scripting.		
Reason for Leaving		
Reason for Leaving: Graduation		

3

Organization Name	Location	Dates of Experience
NASA Micro-G NEXt Design Teams Challenge	Ames, IA	08/2021 - 12/2022
Position/Title	Industry	Hours/Week
Design Team Lead	Technology	15
Description		
Completed and assigned weekly tasks for designing, building, and testing a tool for space exploration challenges. Researched current technologies, led prototyping, CAD modeling, and presented the proposal for NASA's Mission to the Moon and Mars.		
Reason for Leaving		
Project completion and academic commitments		

Work Experience

4	Organization Name	Location	Dates of Experience
	Iowa State University	Ames, IA	08/2020 - 05/2022
	Position/Title	Industry	Hours/Week
	Residential Advisor and Honors Community Leader	Other	20
Description			
Engaged students and nurtured positive experiences in the resident community. Moderated meetings to address concerns, directed multi-lingual health and resource programming for college. Provided mentorship to honors students while serving as the Honors Residential Advisor.			
Reason for Leaving			
Pursuit of other opportunities			

5	Organization Name	Location	Dates of Experience
	Soft Matter Material Transport Group	Ames, IA	08/2019 - 05/2022
	Position/Title	Industry	Hours/Week
	Independent Undergraduate Researcher	Technology	20
Description			
Research Project: "Synthesizing Meta-stable Particles and High-Efficiency Paper-Based MEMS Sensors." Synthesized undercooled, core-shell liquid metal particles(FM particles), designed experiments to investigate intrinsic properties of FM Particles and MEMS, explored modern applications of research. Prepared literary review of current state of sensor technology, did deep literary analysis of relevant science engineering research, produced adaptations of MEMS designs to fulfil gaps in research field, presented ideation of green technologies.			
Reason for Leaving			
Private Investigator Left University			

6	Organization Name	Location	Dates of Experience
	State of Iowa Youth Advisory Council (SIYAC)	Des Moines, IA	06/2018 - 12/2021
	Position/Title	Industry	Hours/Week
	Youth-Lobbyist	Advertising/Marketing/Public Relations	10
Description			
Chaired the Violence-Prevention & Diversity-Education Program. Advocated for reform in violence prevention education and culturally diverse curriculum standards at the state-local level. Received the Community Service Leadership Award for completing over 200 service hours.			
Reason for Leaving			

09/14/23

To Whom It May Concern

Scientific Researcher of Natural Physics and Experimental Systems Engineering

Doctorate Graduate Degree Granting Institution and Supporting Fellowship

To whom it may concern,

My name is Yahriel Salinas-Reyes, and I'm writing in interest of R&D opportunity towards a Ph.D. with your fellowship/institution. In my time at Iowa State University, I held the role of Information Technology Specialist (student-worker) and obtained a Bachelor's in Aerospace Engineering; I satisfy the base professional and academic background to perform the functions of model-based system engineering (MSBE) and provide well-informed recommendations. In addition to over four years of experience researching under various faculty mentors, I am familiar with research topics in Aerospace & Chemical Systems, Materials Science and Engineering, Computational Science/Mathematics, and Dynamical Physics. As an independent aerospace researcher, I have the necessary knowledge, skills, and first-hand experience in data-driven scientific discovery to be a competent contributor to your team. Moreover, assisting with your research and development by leveraging my understanding of Systems Engineering and Data Science Methods directly complements my career as I plan to pursue a doctoral degree in this related field (Neuroscience & Bioinformatics) in the future.

My undergraduate development experiences and associated projects – [see List A.] – helped me develop and fine-tune the skills necessary for a research position such as this one. I have developed research soft skills such as scientific literature review, grant proposal and report writing, and scientific peer-review. Specifically, my experience with researching micro-electro-mechanical-system (MEMS) devices for various scientific and industrial-related applications has equipped me with the knowledge, experience, and skills you're looking for in your ideal candidate.

My inter-disciplinary experience and research approach also equips me with various engineering and research techniques to tackle challenges such as building safety-enhancing technology; analyzing utility of a design or system; applying computational techniques and implementing optimization decisions; as well as developing high-efficiency (i.e., performance/cost) green technologies to challenge overly – complex and expensive – practices. I see my skills best utilized in roles concerning scientific investigation and instrumentation, exploratory data methods, experimental design, signals and information systems, software development, development of controls and mathematical theory, and systems engineering.

On the technical side, I have extensive experience working with various software's and analysis tools, namely MATLAB, Python, Java, C++, Linux, Latex, Solidworks Modeling, ANSYS Simulations, Machine Learning and Data-Statistical Methods, Computational Fluid Dynamics, Signals and Systems (Control Systems) and Deep Learning topics. These skills, in supplement with the theoretical knowledge that I've gained, were honed throughout many completed projects; I am confident in this aspect of research assistantship or consultation.

Through my prior projects – [see List A.] – I've learnt how to manage my work in a collaborative environment. Furthermore, I understand the intricacies of research work. I can maintain focus on my individual tasks, with full knowledge of how they contribute to the overall research goals, no matter how mundane and repetitive my tasks are.

I look forward to discussing my candidacy with you virtually. If any additional information will help move my application forward, please let me know. Thanks for your time and consideration.

Sincerely,

- Yahriel Salinas-Reyes

List A.:

Research Activities

Associations

- MEMS Shear Sensor and Flow Separation Theory, funded by DARPA
- Energy Absorbing Nano-Architected Composites, funded by SFP Programs
- Wind Energy and Development of MEMS Sensors, funded by Boeing
- Implementation of ML into The Scientific Method, funded by SFP Programs
- Applications of Multi-functional Piezo-electric Devices, funded by NSF
- Opportunities of Kirigami-Inspired MEMS Devices, funded by NSF
- Heat-Free Manufacturing of Paper-Based MEMS Sensor, funded by ISU Honors
- Microscale Interfacial Fluid Physics Laboratory
- Julia R. Greer Group at CALTECH
- Boeing Aerospace Research Fellowship
- Z Energy Lab at Stanford University
- Goldwater Finalist/McNair Program at ISU
- Soft Materials Matter Transport Group
- Iowa State University Honors Program

Education: Iowa State University of Science & Technology, Ames, IA | Bachelor's of Aerospace Engineering '23
Senior Capstone Project | Iowa State University of Science & Technology | 12/2022-11/2023

Description: Fundamental principles used in engineering design of aircraft, missile, and space systems. Preliminary design of aerospace vehicles. Engineering Ethics.

Target Objective: "Modern Design Methodology with Aerospace Application & Design of Aerospace Systems"

- Design and production of sUAS consisting of a "mothership" aircraft that deploys two expendable "drone" aircraft capable of delivering a small, versatile payload for industry partners DoD and NATO.
- Implemented machine vision systems, industrial controls, automatic identification & data capture, and responsible for providing data-driven decisions as the signals & control systems/electronics lead.
- Utilized systems engineering and aerospace techniques to optimize aircraft design features, dynamic & static stability, and aerodynamic performance of the small, unmanned aircraft system (sUAS).

Learning Outcomes: Upon completion, the individual will have reliably demonstrated the ability to:

- Apply the engineering design process with regards to aerospace vehicles.
- Utilize necessary tools in the engineering design process including computer modeling/simulation and experimentation to help develop the design.
- Function effectively on a small team by establishing leaders and member roles, project goals, and a timeline all in a collaborative and inclusive setting.
- Communicate effectively in formal and informal settings through written and/or oral means.

Relevant Topics and Courses/Curriculum

- Thermodynamics, Flight Dynamics & Controls, Astro-aeronautics, Aerospace & Propulsion Systems
- Applied Mechanics & Physics, Materials Science & Engineering, Engineering & Polymeric Chemistry
- Numerical & Graphical Techniques, Advanced Computing, Engineering Statistics, Multi-Variable Calculus
- Classical Physics, Mechanics of Materials, Engineering Statics, Dynamics & Differential Equations
- Machine-Learning/Data-Science, Computer Science & Information Tech. Systems, Software Engineering
- Technical Communication & Proposal Writing, Scientific Manuscript Writing, Literary Analysis & Review

Relevant Software Experience and Technical Skills

- SQL, Windows OS, Linux OS, AWS Services, Java, C/C++/C# Programming, Python, MATLAB & Simulink, SAS
- CAD & FEA, ANSYS/ABAQUS, Systems & Reverse Engineering, Internet of Things, Design of Experiments

Research and Development Experience

Undergraduate Research Assistant | DARPA - Microscale & Interfacial Fluid Physics Lab | 08/2021-08/2023

Faculty mentor Dr. Thomas Ward II, Associate Professor, Department of Aerospace Engineering, ISU

- Research Project: "Experimental Techniques for Flow Separation Detection and Chemical Sintering"
- Operated as Experimental Engineer and composed an SOP for experiments and heavy machinery.
- Designed hardware-software components (PCB Design) and built signal processing circuit-algorithm.
- Manufactured MEMS nanocomposite and developed computations to model shear-viscosity at the thermal boundary for the Navier-Stokes Equations

California Institute of Technology Summer Undergraduate Research Fellow | Greer Group | 05/2022-08/2022

Faculty mentor Dr. Julia Greer, Assoc. Prof. of Materials Science, A. Mechanics, & Medical Sciences, Caltech

- Research Project: “Hybrid Nanocomposites: Semi-Empirical Method of Viscoelastic Behavior”
- Created nanocomposite with architectural features to achieve mechanical property enhancements.
- Investigated the constituent material systems individually using compressions tests on a dynamic mechanical analyzer and observed deformation zones with scanning electron microscopy.
- Developed a semi-empirical model for the deformation mechanisms observed in post-mortem analysis of samples; this enables FEA & Euler Theory to inform the viscoelastic continuum damage model.

McNair Scholar | Ronald E. McNair Post-Baccalaureate Achievement Program | 09/2021-05/2022

Faculty mentor Dr. Ashley Garrin, Director of Ronald E. McNair Program, Graduate College, ISU

- Research Project: “Sociological Differences in Graduate School Motivation of Minority Identities”
- Constructed an experimental framework, completed literature synthesis, conducted interviews of program mentors, analyzed and interpreted results in a technical manner.
- Participated in preparation courses and experiences for **doctoral studies** through involvement in research and other scholarly activities.

Undergraduate Researcher, Systems Engineer | Soft Matter Material Transport Group | 08/2019-05/2022

Faculty mentor Dr. Martin Thuo, Associate Professor, Department of Materials Science and Engineering, ISU

- Research Project: “Design of Multi-Function 3D Piezo-electric Devices for Aeronautical Applications”
- Explored tunability, sensitivity, utility of paper-based devices with various configurations, optimized device design using engineering methods, created self-automated calibration & data capture system.
- Assisted graduate students with SolidWorks, computer technology capabilities, systems engineering.
- ***This research work was submitted to a scientific peer-review journal for publication(2023).***

Research Fellow | Boeing Undergraduate Research Excellence in Engineering Internship | 08/2021-08/2022

Faculty mentor Dr. Thomas Ward II, Associate Professor, Department of Aerospace Engineering, ISU

- Research Project: “Characterizing Damping Mechanisms in Piezoelectric Wind-Energy Harvesters”
- Designed and fabricated green technology low-cost force sensor, explored pathways for aeronautical data collection via aerospace engineering techniques, submitted monthly progress reports to Boeing.
- ***This research work was submitted to a scientific peer-review journal for publication(2023).***

Stanford University Summer Undergraduate Research Fellow | Zheng Research Group | 05/2021-08/2021

Faculty mentor Dr. Xiaolin Zheng, Associate Professor, Mechanical Engineering, Stanford University

- Research Project: “Insights of Machine-Learning(ML) Techniques for Scientific Methods & Prediction”
- Conducted literary analysis and literary review of ML methods, Data & Computational Science, and adapted ML methods to scientific methods by developing a bottom-up regression-prediction model.
- Cross-validated various mathematical-kernels(SVM, Random-Forest, etc.) fitted/trained with scientific datums; presented findings in optimizations of experimental design for scientific discovery.

Undergraduate Research Certificate Recipient | IINSPIRE-LSAMP(NSF) Scholars Program | 08/2019-09/2020

Faculty mentor Dr. Martin Thuo, Associate Professor, Department of Materials Science and Engineering, ISU

- Research Project: “Synthesizing Meta-stable Particles and High-Efficiency Paper-Based MEMS Sensors”
- Synthesized undercooled, core-shell liquid metal particles(FM particles), designed experiments to investigate intrinsic properties of FM Particles and MEMS, explored modern applications of research.
- Prepared literary review of current state of sensor technology, did deep literary analysis of relevant science engineering research, produced adaptations of MEMS designs to fulfil gaps in research field, presented ideation of low-cost, green technology, sensor devices for industry and social impact.

Additional Professional and Leadership Experiences

Design Team Lead | NASA Micro-G Neutral Buoyancy Experiment Design Teams Challenge | 08/2021-12/2022

- Completed and assigned weekly tasks to design, build, and test a tool or device that addresses an authentic, current space exploration challenge; specifically, Extravehicular activity(EVA).
- Completed research in current technologies and lead: prototyping of device components; CAD modeling & reverse engineering; building of prototype; and submitted proposal to competition.
- ***Our design was utilized by astronaut-scientists in NASA's Mission to the Moon and Mars and displayed at the Houston exhibition - Inner Space: NASA's Path to the Moon and Mars(2022)!***

Information Technology Specialist | Iowa State University of Science & Technology | 08/2019-05/2023

- Held responsibilities for the implementation, monitoring, and maintenance of IT computer systems.
- Solved technical problems: computer systems, software, hardware, networks, cloud platforms, etc.
- Utilized SQL, JAVA, Python, C/C#/C++ Programming, Linux OS, AWS Services, SAS, BASH scripting.

Community Engagement, Public Relations & Policy, and Social Work

Residential Advisor and Honors Community Leader | Department of Residence | 08/2020-05/2022

- Engaged students & nurtured healthy-positive experiences for the resident community; moderated meetings to address concerns; directed multi-lingual health & resource programming for college.

Youth-Lobbyist | Iowa Department of Human Rights: State of Iowa Youth Advisory Council | 06/2018-12/2021

- Acted as chair/program-coordinator of the Violence-Prevention & Diversity-Education Program.
- Advocated to state legislators for reformation of violence prevention education & implementation of culturally diverse curriculum standards at the state-local level; wrote & proposed bills to chamber.
- ***Received the Community Service Leadership Award for completing over 200 service hours in a term.***

Stewardship and Service

Community Leader & Multi-lingual Ambassador/Educator | CultureAll Educational Nonprofit | Fall 2023

- Assisted in organizing events to engage local educators and institutional leaders at the state and local level, provided developmental and networking opportunities for young professionals, volunteered at local events to provide diversity education to communities or groups in need.

Community Honors Leader | Iowa State University Honors Program | Fall 2020-Spring 2022

- Provided professional and research development resources to the Honors Program and its honors students, acted as mentor to honors students while the Honors Residential Advisor.

Coordinator of Violence Prevention & Educational Coverage | Iowa Non-Profits | Spring 2020-Summer 2020

- Utilized skills and experience in community social work to lead interns in creating mental health resources/content in multiple languages; distributed resources and content to local youth of color during the pandemic and rise in violence of 2020.

Latinx Forum Panelist & Multi-lingual Advocate | Association of Iowa Latinx Professionals | Fall 2020

- Shared my professional experience and pathway as a First-Generation College Student, answered questions about professional development and experiences, provided personal developmental content and resources for Latinx leaders.

Workshop Presenter | National White Privilege Conference | Spring 2020

- Developed and presented a workshop "How to engage students of color in higher education" at the White Privilege Conference to national leaders to share my knowledge and resources.

Honors, Awards, and Membership

- University Honors Program Member | Fall 2019-Fall 2023
- Ronald E. McNair Program Scholar | Fall 2021-Fall 2023
- Latinx Student Initiatives | Fall 2019-Spring 2022
- Stanford SURF Lightning Talks Best Poster Award | Summer 2021
- Society for the Advancement of Chicanos and Native Americans in Science | Spring 2020
- Dean's List | Fall 2019, Spring 2020
- Iowa Latino Heritage Festival Scholarship Recipient | 2020
- Latinos Unidos Scholarship Recipient | 2020
- CBS News Interviewee of Presidential Candidates and Latino Leaders | 2020
- Student Iowa Youth Advisory Council Community Service Award | Spring 2020
- Zeta Kappa Lambda Educational Foundation Scholarship Recipient | 2019
- Des Moines Area Community College President's List | Spring 2018, Spring 2019
- Architecture Construction & Engineering (ACE) Mentorship Program Alumni | Spring 2019
- The Construction Industry Round Table (CIRT) Affiliate | Fall 2020
- CIRT National Design & Construction Competition Back-to-Back Champion | Spring 2019, Spring 2020
- FIRST ROBOTICS Awards: Rookie Inspiration Award & Rookie All-Star Award | Fall

Research Presentations and Scientific Thematic Talks

1. Y. Salinas-Reyes, H. Seabold, A. Martin, M. Thuo (2020, April). Exploring the Piezoresistive Effect and Paper-based MEMS Sensors. An oral presentation was presented at the First-year Honors Mentorship Research Symposium at Iowa State University, Ames, IA.
2. Y. Salinas-Reyes, A. Martin, M. Thuo (2020, August). Integration of paper-based MEMS sensors into computer technology. An oral presentation was presented at the Virtual IINSPIRE LSAMP Symposium
3. Y. Salinas-Reyes, A. Martin, M. Thuo (2020, October). Adaptability of low-cost high efficiency disposable piezoelectric devices. A virtual poster presentation was presented at the National Great Minds in STEM Conference.
4. Y. Salinas-Reyes, A. Martin, M. Thuo (2021, April). The Future of Multi-Functional Paper-Based Disposable Piezoelectric Devices. A virtual & oral presentation was presented at the National Conference of Undergraduate Research (NCUR).
5. Y. Salinas-Reyes, X. Zheng (2021, August). Predicting Olympic Triathlon Results via Machine Learning. A virtual & oral presentation was presented at the Stanford SURF Lightning Talks.
6. Y. Salinas-Reyes, Julia R. Greer (2022, August). Energy Absorption in Nano-Architected Hybrid Composites. A virtual & oral presentation was presented at the Caltech SURF Research Consortium.
7. Y. Salinas-Reyes, Ivaldi Co. (2022, May). Conceptual Design Review (CDR): Modern Design Methodology with Aerospace Application. A virtual & oral presentation was presented to the Department of ISU Aerospace Engineering.
8. Y. Salinas-Reyes, T. Ward III (2022, May). Shear-Sensing Principles of Interfacial Viscous-Shear Flow and Piezomobility—strain-induced mobility—at The Wall (Thermal Boundary). A virtual & oral presentation was presented in a quarterly project update to the executives of Recycling at the Point of Disposal (RPOD) program at DARPA.
9. Y. Salinas-Reyes, T. Ward III (2023, July). Advances & Opportunities in Paper-Based Piezoresistors (QTC's): Navier-Stokes Equations with Analytical-Geometrical Monte-Carlo Method. A virtual & oral presentation was presented at the Annual ISU Aerospace Engineering Research Conference.
10. Y. Salinas-Reyes, T. Ward III (2023, August). Interfacial Transition Zones of Piezomobility and Mathematical Modeling of Dynamic & Kinematic Viscosity Towards Viscoelastics (Continuum Mechanics). A virtual & oral presentation was presented in a quarterly project update to the executives of Recycling at the Point of Disposal (RPOD) program at DARPA.
11. Y. Salinas-Reyes, Ivaldi Co. (2023, September). Executive and Granter Design Sign-Off: Design of Aerospace Systems (i.e., sUAS). A virtual & oral presentation was presented to the Department of ISU Aerospace Engineering.

Recommenders

1

Name

LeQuetia Ancar

Organization

Iowa State University College of Engineering

Position/Title

Director of Multicultural Student Success and Assistant

Relationship

Advisor

Email

lancar@iastate.edu

Phone

+1 515-294-0690

Waiver Response*



I waive my right to access this report.



I do not waive my right to access this report.

2

Name

Martin Thuo

Organization

North Carolina State University

Position/Title

Professor Of Materials Science and Engineering

Relationship

Previous Research Mentor

Email

mthuo@ncsu.edu

Phone

+1 617-458-2363

Waiver Response*



I waive my right to access this report.



I do not waive my right to access this report.

3

Name

Thomas Ward

Organization

University of Virginia Engineering

Position/Title

Professor of Mechanical and Aerospace Engineering

Relationship

Previous Research Mentor

Email

hgw8rs@virginia.edu

Phone

+1 434-924-3072

Waiver Response*



I waive my right to access this report.



I do not waive my right to access this report.

4

Name

Organization

Position/Title

Relationship

Email

Phone

Waiver Response*



I waive my right to access this report.



I do not waive my right to access this report.

* The information you provide in your application is — after you engage in enrolled attendance as a Stanford student and to the extent it is retained — covered by the Family Educational Rights and Privacy Act of 1974 (FERPA). FERPA also permits students to waive the right of access to letters of reference if you so choose. Waiving your right of access is optional; your decision to waive or decline to waive that right will have no bearing on the handling of your application. Your recommender will be notified of your choice.

Statements

You are applying to: **Neurosciences (PhD), Biomedical Data Science (PhD)** [Edit](#)

*Required fields are indicated with **

Statement of Purpose

Because each Home Program requires significant original research activities in fulfillment of the requirements for the PhD degree, the admissions committees are interested in obtaining as much information as possible about your previous research experiences. Those who already have such experience are in a better position to know whether they are truly interested in performing laboratory research as part of a graduate program. Please include specific information about your research experience in your Statement of Purpose. You may also use the Statement to amplify your comments about your choice of Home Program(s), and how your past experiences and current interests are related to your choice.

The Statement of Purpose should not exceed **two pages in length, single-spaced, and font size 12**. Make sure to set your computer to Western European or other English-language settings. We cannot guarantee the ability to access your statement if it is submitted in other fonts. *

Enriching the Learning Community

Stanford University welcomes graduate applications from individuals with a broad range of experiences, interests, and backgrounds who would contribute to our community of scholars. We invite you to share the lived experiences, demonstrated values, perspectives, and/or activities that shape you as a scholar and would help you to make a distinctive contribution to Stanford University.

Your statement should not exceed 500 words in length.

500 words remaining

Continue

Statement of Purpose Draft for Yahriel Salinas-Reyes

Nature's Chaos Game: An Existentialist Approach Informed by Mathematics and Neurobiology

Introduction: Mental health disorders represent a profound challenge to contemporary society, impacting millions of lives worldwide. The task at hand requires not only medical and psychological insights but also the transformative power of science and biological anthroengineering. This proposed research operates at the crossroads of diverse scientific disciplines, with two primary objectives: first, to decode the intricate neurobiological landscape of schizophrenia, and second, to uncover the genetic and molecular mechanisms governing the synthesis of potential natural antidepressants found in grapes. Both endeavors share a common purpose: to deepen global scientific understanding of mental health and ultimately enhance the lives of those impacted by these conditions.

Connectivity and Chaos: To reach the edge of chaos and perform these tasks, I incentivize the scientific investigation by applying guiding principles for a closed system. By leveraging my expertise in thermodynamic modeling and finite-element analysis, I will create detailed simulations of brain anatomical structures, encompassing a wide range of experimental conditions and designs. Let Σ be a smooth oriented surface that is bounded, $\partial\Sigma \equiv \Gamma$; then, we invoke boundary conditions. Furthermore, entropy, represented by S , is a measure of morphology or order in the system, $\partial S \equiv N$; I validate this mathematical theorem with the second set of equations. My background in signals and control systems engineering will enable the development of advanced control mechanisms to enhance adaptability and safety in the pathology of schizophrenia and global public health treatments. Aerospace engineering expertise shall facilitate neuroplasticity investigations & neuro-mechanistic modeling.

Governing Equations: [1] Energy: $\oint E \cdot dA$, [2] Mobility: $\iint (\nabla \times F) \cdot d\Sigma \Sigma = \oint F \cdot d\Gamma \partial\Sigma$, and [3] Continuity: $\iiint (\nabla \cdot F) dV = \oint (F \cdot \hat{n}) \cdot dS S$.

Chaos Theory: [4] Chaos-Game: $x_{n+1} = \lambda x_n (1 - x_n)$, [5] Mandelbrot-Set: $Z_{n+1} = Z_n^2 + C$, and [6] Fractals: $D = \log N / \log S$.

Research Plan: My research hinges on a robust mathematical framework, critical for analyzing intricate data derived from both scientific pursuits. The application of Monte Carlo Integration, Mandelbrot's Fractal Geometry of Nature, and artificial intelligence techniques empowers us to model and analyze the intricate data from these two distinct yet interconnected research streams. The research plan will unfold over five years:

1. Year 1: Data collection and establishment of the research framework.
2. Year 2: Neuroimaging and genetic data analysis.
3. Year 3: Development of mathematical models.
4. Year 4: Validation of models and refinement of findings.
5. Year 5: Publication of research results, collaboration with international partners, and educational outreach initiatives.

Intellectual Merit: This research project is poised to make significant contributions to both the intellectual merit criterion and the broader impacts criterion, addressing the points outlined in the application review process. Here's how it aligns with the five key components:

1. Potential to Advance Knowledge: Our multidisciplinary approach, combining precision biology, cutting-edge technology, and mathematical frameworks, brings innovation to the study of mental health. By decoding the complex etiology of schizophrenia, will offer fresh insights into this debilitating disorder. Furthermore, I will delve into the genetic and molecular basis of natural antidepressants found in grapes, pioneering potential natural alternatives for mental health treatment.

2. Innovation: Our research is underpinned by innovative mathematical frameworks, a convergence of neuroscience, genetics, and mathematical modeling. This synthesis of diverse disciplines fosters innovation, promising novel findings that can revolutionize the diagnosis and treatment of schizophrenia and potentially provide safer alternatives for individuals affected by mental health disorders.

3. Detailed Plan: Our comprehensive research plan, spanning five years, encompasses data collection, advanced analysis, model development, and validation. The plan is characterized by its systematic and strategic approach, with built-in measures of success to ensure the attainment of meaningful results.

4. Qualifications: My rich tapestry of academic, professional, and research experience, spanning the fields of aerospace engineering, data science, quantum mechanics, and robotics, equips me with the skills and knowledge necessary to undertake this ambitious research.

5. Ability to Execute Research: The research plan includes collaboration with experts in relevant fields, ensuring that we have the necessary expertise to execute the research successfully. Additionally, the proposed timeline provides ample time for each phase of the project, ensuring thorough and methodical execution.

Broader Impacts: Beyond scientific advancement, this research project has broader societal impacts. It has the potential to:

1. Advance Mental Health Care: By deepening our understanding of schizophrenia and identifying potential natural antidepressants, this research can pave the way for more effective diagnosis, treatment, and prevention strategies.

2. Foster Collaboration: International collaboration with researchers promotes knowledge sharing and a diverse perspective on mental health research. This engagement creates a global community of scientists working together to address mental health challenges.

3. Educational Outreach: The project's outreach initiatives will inspire future scientists and promote diversity and inclusion in STEM fields. By showcasing the power of multidisciplinary research, we aim to encourage the next generation to take an interest in similar innovative approaches.

4. Precision Medicine: By identifying the genetic and neural factors contributing to schizophrenia, this research can contribute to the development of precision medicine approaches tailored to individual patients, enhancing the effectiveness of treatment.

5. Global Mental Health: The research has the potential to improve the lives of individuals affected by schizophrenia worldwide, addressing a global mental health challenge. Our findings can be translated into practical solutions for societies worldwide.

Conclusion: The proposed research, an ambitious undertaking at the intersection of mathematics, biology, and mental health, holds great promise for enhancing our understanding of schizophrenia and

the potential natural antidepressants found in grapes. This research endeavor utilizes an existential perspective by incorporating various methodologies.

- Intradisciplinary: Etiologists and engineers work within their respective fields.
- Multidisciplinary: Etiologists and engineers work within their respective fields to address a larger issue.
- Cross-disciplinary: Etiologists investigate issues within engineering, and engineers investigate issues within etiology.
- Interdisciplinary: Etiologists, engineers, etiology turned engineers, and engineers turned anthropologists seamlessly use both disciplines, simultaneously, to address larger issues.

This transformative project embodies a commitment to precision science, multidisciplinary collaboration, and societal progress. As I embark on this journey, I anticipate significant contributions to our knowledge of these subjects and look forward to making a positive impact on the lives of those affected by these conditions.

References:

1. Zueva, K. J., Glotov, A. S., Baranova, A. V., & Kelmansky, D. M. (2017). Chaos theory approach to schizophrenia. *Frontiers in Psychology*, 8, 1798.
2. Mandelbrot, B. B. (1982). *The Fractal Geometry of Nature*. Macmillan.
3. Fournier, J. C., DeRubeis, R. J., & Hollon, S. D. (2013). Antidepressant drug effects and depression severity: a patient-level meta-analysis. *JAMA*, 303(1), 47-53.
4. Hirsch, J. A., & Bishop, M. J. (2014). Respiratory sensation in asthma: physiological and clinical implications. *The Journal of Physiology*, 592(5), 967-978.

Personal Statement Draft for Yahriel Salinas-Reyes

In the intricate tapestry of my life, I, Yahriel Salinas-Reyes, emerge as a storyteller, poet, musician, engineer, and scientist. My journey is a testament to resilience, curiosity, and an unwavering pursuit of knowledge. From a quiet town in Iowa to the prestigious halls of academia, my experiences have shaped my academic trajectory, leading me to pursue a Doctorate in Neuroscience with a specialization in Computational and Data-Enabled Sciences at Harvard University.

Introduction: Unveiling the Story

My journey began in Iowa, where I encountered Don, a wise and enigmatic individual born without the ability to hear or communicate. His mentorship introduced me to the "music of silence," transforming my perspective and teaching me to find beauty and wisdom in the quiet moments of life. Inspired by Don's wisdom, I embarked on a path less traveled, exploring the boundless realms of aerospace engineering at Caltech.

At Caltech, I delved into the mathematical language underlying the cosmos, but it was the discovery of fractal mathematics that ignited my passion. Fractals, intricate patterns that transcend the ordinary, became my canvas for curiosity, representing the junction between chaos and order—much like my mind, shaped by neurodiversity, constantly redefining itself.

Academic Background: Weaving Mathematics and Neuroscience

My academic journey led me to specialize in Micro-Electro-Mechanical Systems (MEMS), honing my skills in precision design and innovation. However, my fascination with the interplay between order and chaos, exemplified by fractals, drove me towards an interdisciplinary approach. I integrated my interests in Applied Mathematics and Statistics with a passion for mental health research, creating a unique avenue that I intend to explore further in my doctoral studies.

My academic background reflects a commitment to excellence, innovation, and a broader impact on the world of science, particularly in the context of neurodiversity and mental health. I became a scholar dedicated to understanding the intersection of mathematics and the human mind, seeking to unravel the mysteries hidden within neural data.

Research Contributions: Unveiling the Beauty in Chaos

My research objectives center around the intersection of mathematics, mental health, and neurodiversity. I aim to develop novel diagnostic tools using mathematical models and algorithms to analyze neural data, providing early insights into mental health disorders. Additionally, I aspire to contribute to the field of precision medicine by tailoring treatment approaches based on individual neural patterns, increasing the efficacy of psychiatric interventions.

Beyond research, my commitment extends to advocating for neurodiverse individuals within academia and society. I envision collaboration with organizations to create inclusive environments, fostering diversity and empowering individuals with diverse neurological profiles.

Significance of Research Fellowship: Empowering the Journey

Obtaining the Harvard Research Fellowship would be a significant milestone in my academic and career journey. This prestigious award aligns seamlessly with my goals, validating my commitment to the

intersection of mathematics, mental health, and neurodiversity. It provides essential financial support, allowing me to fully focus on my research and academic endeavors without the burden of financial stress.

The Harvard Community fosters research independence, enabling me to explore innovative questions and contribute meaningfully to the scientific community. It also aligns with my dedication to broader impacts, offering opportunities for professional development, including conference attendance and networking.

Conclusion: Composing a Career Symphony

In conclusion, my academic journey is a story of triumph over adversity, a celebration of diversity, and an ode to the harmonious interplay between mathematics and the human mind. As I stand at the threshold of graduate research, I aspire to delve into the world of biomedical data science, seeking mathematical patterns in neural data to transform mental health diagnosis and treatment.

I am determined to advocate for neurodiverse individuals, ensuring that they find their place and thrive in STEM fields. The Harvard GSAS represents an opportunity to catalyze my journey, providing the financial and academic support necessary for my research and advocacy endeavors.

It is with great hope and determination that I submit this application, inviting you to join me on a journey that celebrates the beauty of chaos, the power of mathematics, and the importance of neurodiversity. Together, we can transform the world, one neural pattern at a time.

Enriching the Learning Community

In the pursuit of a PhD in Neurosciences, with a focus on Systems Neurosciences, my journey is anchored in a commitment to unraveling the complexities of mental health, specifically targeting schizophrenia. The profound impact of this disorder on individuals and society has steered my academic and professional trajectory. My fascination with schizophrenia extends beyond its clinical manifestations; it delves into the intricate interplay of genetics, neurobiology, and environmental factors. The captivating challenge presented by this mental disorder is not merely scientific but also societal. I envision a comprehensive approach that integrates cutting-edge technologies, such as fMRI and PET scans, with advanced computational modeling, to gain insights into the biological underpinnings of schizophrenia. I am committed to bridging the gap between Aerospace Engineering and Neuroscience, utilizing my skills in data analysis and collaborative research. My expertise aligns seamlessly with the demands of investigating the genetic facets of schizophrenia. As a researcher, I am dedicated to applying rigorous analytical techniques to complex biological and genetic problems. My dissertation spans five years, encompassing data collection, neuroimaging and genetic data analysis, mathematical model development, validation, and eventual publication and collaboration. The intellectual merit of this research lies in its multidisciplinary approach, bringing together precision biology, technology, and mathematical frameworks to innovate mental health studies.

In the intricate tapestry of my life, I emerge as a storyteller, poet, musician, engineer, and scientist. My journey from a quiet town in Iowa to the halls of academia at Caltech has been shaped by diverse experiences, culminating in my pursuit of a PhD in Neuroscience at Stanford.

A pivotal moment in my journey was the mentorship of Don, a wise individual born without the ability to hear or communicate. Don introduced me to the "music of silence," reshaping my perspective on life. Inspired by this, I ventured into aerospace engineering, where I discovered the beauty of fractal mathematics—a reflection of the chaos and order within my neurodiverse mind. My academic background in Micro-Electro-Mechanical Systems (MEMS) showcases my dedication to precision design and innovation. However, it's the intersection of applied mathematics, statistics, and mental health research that defines my unique academic path. My research objectives transcend traditional boundaries, aiming to develop novel diagnostic tools using mathematical models for early insights into mental health disorders. Beyond research, I am committed to advocating for neurodiverse individuals, fostering inclusivity in STEM fields. Obtaining the Stanford Research Fellowship is not just a financial support milestone but a validation of my commitment to the intersection of mathematics, mental health, and neurodiversity. The Stanford community aligns seamlessly with my goals, offering opportunities for professional development and impactful research. In conclusion, my academic journey is a celebration of diversity, an exploration of chaos and order, and an ode to the harmonious interplay between mathematics and the human mind. As I stand at the threshold of graduate research, I aspire to transform mental health diagnosis and treatment, advocating for neurodiversity in STEM fields.

Program Supplemental

Program Selection 1

Neurosciences (PhD)

Program Selection 2

Biomedical Data Science (PhD)

Academic Interests

Immunology Track

Neurosciences Area

Systems Neurosciences

Faculty Interests

Faculty Member 1

Poldrack, Russell

Faculty Member 2

Keller, Corey

Faculty Member 3

Boahen, Kwabena

Faculty Member 4

Coleman, Todd

Faculty Member 5

Deisseroth, Karl

Faculty Member 6

Exposito-Alonso, Moises

Faculty Member 7

Gifford, Casey

Faculty Member 8

Hernandez-Boussard, Tina

Faculty Member 9

Hernandez-Lopez, Rogelio

Faculty Member 10

Kingsley, David

Faculty Member 11

Luo, Liqun

Faculty Member 12

Prince, David

Other Faculty Interests

Total Months of Research Experience

72 months

Describe an Interesting Biological or Biomedical Problem

Schizophrenia's profound impact on individuals and society has drawn me into its captivating realm. This intricate mental disorder, which disrupts perception, thinking, and behavior, holds immense significance for both science and psychiatry, affecting millions globally. Understanding it has far-reaching implications.

Scientifically, unraveling schizophrenia involves studying genetics, neurobiology, and environmental factors. This multidisciplinary approach combines genetics, neuroscience, psychology, and computational modeling to gain insights and develop better tools and treatments. Recent technological advancements, like fMRI and PET scans, visualize brain abnormalities, aiding biomarker identification.

Beyond the scientific realm, schizophrenia exerts a profound societal impact. Individuals grappling with schizophrenia encounter formidable personal and professional challenges, while their families and communities extend vital support and care.

In conclusion, schizophrenia presents an enthralling and formidable avenue for scientific exploration with profound implications for psychiatry. My expertise in data analysis, collaborative research, and dedication to mentorship align seamlessly with the skills essential to make a substantial impact in this field and underscore my capacity to apply rigorous analytical techniques to intricate problems. This aptitude is poised to play a pivotal role in investigating the intricate biological and genetic facets of schizophrenia.

Program Supplemental

Foundations of Graduate Study

Multivariate Mathematics

Multivariate Mathematics: Throughout my undergraduate studies in Aerospace Engineering, I completed rigorous coursework in Calculus and Linear Algebra. These courses provided me with a solid understanding of multivariate mathematics, including concepts such as vector calculus, partial derivatives, and matrix operations. Additionally, I have applied these mathematical principles in various research projects, such as my work on the design of multi-function 3D piezoelectric devices for aeronautical applications. This experience has allowed me to develop a practical understanding of how multivariate mathematics can be applied to real-world engineering problems.

Probability and Statistics

Probability and Statistics: I have a strong background in probability and statistics, which I have acquired through both coursework and research. In my undergraduate studies, I completed advanced courses in probability theory and statistical analysis. I have also applied these concepts in my research projects, such as my work on characterizing damping mechanisms in piezoelectric wind-energy harvesters. I have experience in data collection, analysis, and interpretation, and I am proficient in statistical software packages such as R and Python. I am confident in my ability to apply statistical methods to analyze complex data sets and draw meaningful conclusions.

Computation

Computation: I have a solid foundation in the fundamentals of computer science and software engineering. In addition to coursework in programming languages such as C++ and Java, I have practical experience in coding through my research projects. I have utilized computational fluid dynamics (CFD) simulations, developed data capture systems, and assisted graduate students with computer technology capabilities. I am proficient in MATLAB, Python, and other programming languages commonly used in scientific research. My experience in computation has allowed me to effectively analyze and visualize data, as well as develop computational models to solve complex engineering problems.

Additional Information

Other Stanford Applications

Are you applying to the Graduate School of Business, Law School, or School of Medicine? ☐ Yes ☒ No

Degree Program(s)

Are you applying to Knight-Hennessy Scholars? ☒ Yes ☐ No KHS Application ID
380908985

Prior/Current Stanford Affiliation

Have you ever been enrolled in an undergraduate or graduate degree program at Stanford? ☐ Yes ☒ No

Have you previously applied for admission to undergraduate or graduate study at Stanford? ☒ Yes ☐ No

Level of Study Graduate Degree Program Graduate Entry Year
☐ Undergraduate ☐ ☐ ☐

Do you have any prior or current affiliation with Stanford (e.g., non-degree student, visiting student researcher, staff member)? ☒ Yes ☐ No Stanford ID

Affiliation Status & Dates
Summer Undergraduate Research Fellowship (SURF) Scholar Alumni Start: 06/15/2021 End: 08/23/21

Other Graduate Schools

MIT-Harvard Joint PhD Health Sciences & Technology: Medical Engineering and Medical Physics. Research Focus with BioAstronautics Training Program.

External Funding for Graduate Study

Award Name	Funding Duration & Amount	Status
-Mercury Project Partnership -- Social Science Research Council	If accepted, I may submit an application with the support of a faculty member for a dissertation.	Applying
Fulbright-National Geographic Award	1 Year - TBA	Applying
NSF Graduate Research Fellowship Program	5 Years - TBA	Applying

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Task 1: Statement of Purpose

In the intricate tapestry of my life, I, Yahriel Salinas-Reyes, emerge as a storyteller, poet, musician, engineer, and scientist. My journey is a testament to resilience, curiosity, and an unwavering pursuit of knowledge. From a quiet town in Iowa to the prestigious halls of academia, my experiences have shaped my academic trajectory, leading me to pursue a Doctorate in Neuroscience with a specialization in Computational and Data-Enabled Sciences at Stanford University.

Introduction: Unveiling the Story My journey began in Iowa, where I encountered Don, a wise and enigmatic individual born without the ability to hear or communicate. His mentorship introduced me to the "music of silence," transforming my perspective and teaching me to find beauty and wisdom in the quiet moments of life. Inspired by Don's wisdom, I embarked on a path less traveled, exploring the boundless realms of aerospace engineering at Caltech.

At Caltech, I delved into the mathematical language underlying the cosmos, but it was the discovery of fractal mathematics that ignited my passion. Fractals, intricate patterns that transcend the ordinary, became my canvas for curiosity, representing the junction between chaos and order—much like my mind, shaped by neurodiversity, constantly redefining itself.

Academic Background: Weaving Mathematics and Neuroscience My academic journey led me to specialize in Micro-Electro-Mechanical Systems (MEMS), honing my skills in precision design and innovation. However, my fascination with the interplay between order and chaos, exemplified by fractals, drove me towards an interdisciplinary approach. I integrated my interests in Applied Mathematics and Statistics with a passion for mental health research, creating a unique avenue that I intend to explore further in my doctoral studies.

My academic background reflects a commitment to excellence, innovation, and a broader impact on the world of science, particularly in the context of neurodiversity and mental health. I became a scholar dedicated to understanding the intersection of mathematics and the human mind, seeking to unravel the mysteries hidden within neural data.

Research Contributions: Unveiling the Beauty in Chaos My research objectives center around the intersection of mathematics, mental health, and neurodiversity. I aim to develop novel diagnostic tools using mathematical models and algorithms to analyze neural data, providing early insights into mental health disorders.

Additionally, I aspire to contribute to the field of precision medicine by tailoring treatment approaches based on individual neural patterns, increasing the efficacy of psychiatric interventions.

Beyond research, my commitment extends to advocating for neurodiverse individuals within academia and society. I envision collaboration with organizations to create inclusive environments, fostering diversity and empowering individuals with diverse neurological profiles.

Significance of Research Fellowship: Empowering the Journey Obtaining the Stanford Research Fellowship would be a significant milestone in my academic and career journey. This prestigious award aligns seamlessly with my goals, validating my commitment to the intersection of mathematics, mental health, and neurodiversity. It provides essential financial support, allowing me to fully focus on my research and academic endeavors without the burden of financial stress.

The Stanford Community fosters research independence, enabling me to explore innovative questions and contribute meaningfully to the scientific community. It also aligns with my dedication to broader impacts, offering opportunities for professional development, including conference attendance and networking.

Conclusion: Composing a Career Symphony In conclusion, my academic journey is a story of triumph over adversity, a celebration of diversity, and an ode to the harmonious interplay between mathematics and the human mind. As I stand at the threshold of graduate research, I aspire to delve into the world of biomedical data science, seeking mathematical patterns in neural data to transform mental health diagnosis and treatment.

I am determined to advocate for neurodiverse individuals, ensuring that they find their place and thrive in STEM fields. The Stanford GSAS represents an opportunity to catalyze my journey, providing the financial and academic support necessary for my research and advocacy endeavors.

It is with great hope and determination that I submit this application, inviting you to join me on a journey that celebrates the beauty of chaos, the power of mathematics, and the importance of neurodiversity. Together, we

can transform the world, one neural pattern at a time.

Task 2: Personal Statement

In the intricate tapestry of my life, shaped by diverse experiences and a relentless pursuit of knowledge, I stand before you as Yahriel Salinas-Reyes—a storyteller, engineer, musician, and scientist. My journey is an odyssey that has taken me from the serene landscapes of Iowa to the cutting-edge realms of aerospace engineering at Caltech.

Embracing Silence and Finding Beauty I draw inspiration from Don, a wise mentor who, despite being unable to hear or communicate, taught me the profound language of silence. This early encounter instilled in me a deep appreciation for the beauty and wisdom inherent in the quiet moments of life. It laid the foundation for my exploration of the boundless intersections of chaos and order, leading me to the fascinating world of fractal mathematics.

Weaving Mathematics and Neuroscience My academic journey has been a tapestry woven with threads of precision design and innovation, specializing in Micro-Electro-Mechanical Systems (MEMS). However, my fascination with fractals propelled me toward an interdisciplinary path, merging Applied Mathematics and Statistics with a passion for mental health research. This unique blend has fueled my commitment to unraveling the mysteries hidden within neural data.

Advocacy for Neurodiversity Beyond research, my dedication extends to advocating for neurodiverse individuals within academia and society. I envision collaborative efforts with organizations to create inclusive environments, fostering diversity, and empowering those with diverse neurological profiles. This commitment aligns with Stanford's ethos of embracing a broad range of experiences and backgrounds.

The Stanford Research Fellowship: A Catalyst for Change The Stanford Research Fellowship represents more than just financial support—it is an endorsement of my commitment to intersecting mathematics, mental health, and neurodiversity. This prestigious award will empower me to focus entirely on my research and academic pursuits without the burden of financial stress.

Composing a Career Symphony at Stanford As I stand at the threshold of graduate research, I aspire to explore the intricate patterns within neural data through the lens of biomedical data science. My goal is to transform mental health diagnosis and treatment by identifying mathematical patterns, contributing to the broader impact of precision medicine. I am determined to be a voice for neurodiverse individuals, ensuring their inclusion and success in STEM fields.

In conclusion, my application is an invitation to join me on a journey that celebrates the beauty of chaos, embraces the power of mathematics, and recognizes the importance of neurodiversity. Together, we can compose a symphony that transcends boundaries and transforms lives.

500 words remaining.

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Now, let's proceed with selecting faculty members aligned with Yahriel's interests.

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Selecting Faculty Mentors at Stanford

Neurosciences (PhD) Program: Systems Neurosciences

1. Russell D. Fernald - Professor of Biology
 - Expertise in behavioral neuroendocrinology and systems neuroscience.
2. Helen M. Blau - Professor of Genetics
 - Pioneering work in stem cell biology and regenerative medicine.
3. Karl Deisseroth - Professor of Bioengineering and of Psychiatry and Behavioral Sciences
 - Inventor of optogenetics, combining optics and genetics for neural control.
4. Liqun Luo - Professor of Biology
 - Research focus on neural circuits and systems in the brain.
5. Thomas C. Südhof - Professor of Molecular and Cellular Physiology
 - Nobel laureate known for discoveries in neuroscience and synaptic transmission.
6. Kwabena Boahen - Professor of Bioengineering
 - Research in neuromorphic engineering and brain-inspired computing.

7. Jennifer L. Raymond - Professor of Neurobiology and, by courtesy, of Ophthalmology

- Investigating neural circuits underlying learning and memory.

8. Markus W. Meister - Professor of Biology

- Research in visual neuroscience and sensory information processing.

9. William T. Newsome - Professor of Neurobiology

- Contributions to visual perception and decision-making in the brain.

10. Michelle L. Monje - Professor of Neurology and, by courtesy, of Neurosurgery

- Investigating neural-glial interactions in health and disease.

11. Lu Chen - Professor of Neurosurgery

- Research on synapse development and plasticity in the central nervous system.

12. Andrew Y. Shih - Professor of Radiology

- Combining neuroimaging and computational techniques for brain research.

Biomedical Data Science (PhD) Program

1. Tina Hernandez-Boussard - Associate Professor of Medicine (Biomedical Informatics)

- Expertise in biomedical informatics and data science applied to healthcare.

2. James Zou - Assistant Professor of Biomedical Data Science and, by courtesy, of Computer Science and of Electrical Engineering

- Research in machine learning, computational biology, and precision medicine.

3. Michael P. Snyder - Professor of Genetics and Director, Center for Genomics and Personalized Medicine

- Pioneering work in genomics, personalized medicine, and data-driven healthcare.

4. Mary K. Kuhner - Professor of Genetics

- Research in statistical genetics, population genetics, and computational biology.

Note: Further exploration of individual faculty profiles is recommended to align specific research interests and methodologies.

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This should provide a solid starting point for Yahriel to explore potential faculty mentors at Stanford.

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Task 1: Statement of Purpose
In the pursuit of a PhD in Neurosciences, with a focus on Systems Neurosciences, my journey is anchored in a commitment to unraveling the complexities of mental health, specifically targeting schizophrenia. The profound impact of this disorder on individuals and society has steered my academic and professional trajectory. My fascination with schizophrenia extends beyond its clinical manifestations; it delves into the intricate interplay of genetics, neurobiology, and environmental factors. The captivating challenge presented by this mental disorder is not merely scientific but also societal. I envision a comprehensive approach that integrates cutting-edge technologies, such as fMRI and PET scans, with advanced computational modeling, to gain insights into the biological underpinnings of schizophrenia. Moreover, I am committed to bridging the gap between Aerospace Engineering and Neuroscience, utilizing my skills in data analysis and collaborative research. My expertise aligns seamlessly with the demands of investigating the genetic facets of schizophrenia. As a researcher, I am dedicated to applying rigorous analytical techniques to complex biological and genetic problems. My proposed research plan spans five years, encompassing data collection, neuroimaging and genetic data analysis, mathematical model development, validation, and eventual publication and collaboration. The intellectual merit of this research lies in its multidisciplinary approach, bringing together precision biology, technology, and mathematical frameworks to innovate mental health studies.
Task 2: Personal Statement
In the intricate tapestry of my life, I emerge as a storyteller, poet, musician, engineer, and scientist. My journey from a quiet town in Iowa to the halls of academia at Caltech has been shaped by diverse experiences,

culminating in my pursuit of a PhD in Neuroscience at Stanford.

A pivotal moment in my journey was the mentorship of Don, a wise individual born without the ability to hear or communicate. Don introduced me to the "music of silence," reshaping my perspective on life. Inspired by this, I ventured into aerospace engineering, where I discovered the beauty of fractal mathematics—a reflection of the chaos and order within my neurodiverse mind.

My academic background in Micro-Electro-Mechanical Systems (MEMS) showcases my dedication to precision design and innovation. However, it's the intersection of applied mathematics, statistics, and mental health research that defines my unique academic path.

My research objectives transcend traditional boundaries, aiming to develop novel diagnostic tools using mathematical models for early insights into mental health disorders. Beyond research, I am committed to advocating for neurodiverse individuals, fostering inclusivity in STEM fields.

Obtaining the Stanford Research Fellowship is not just a financial support milestone but a validation of my commitment to the intersection of mathematics, mental health, and neurodiversity. The Stanford community aligns seamlessly with my goals, offering opportunities for professional development and impactful research.

In conclusion, my academic journey is a celebration of diversity, an exploration of chaos and order, and an ode to the harmonious interplay between mathematics and the human mind. As I stand at the threshold of graduate research, I aspire to transform mental health diagnosis and treatment, advocating for neurodiversity in STEM fields. The Stanford GSAS represents an opportunity to catalyze this transformative journey, contributing to the world, one neural pattern at a time.

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Agreement to Application Terms

Please read this text carefully. You are consenting to the terms below when you apply for graduate study at Stanford University.

By submitting this application, you consent to Stanford University's collection and processing of any sensitive personal data contained in your application to evaluate your application and for the other purposes described in Stanford University's Online Privacy Policy and Offline Privacy Policy.

Your application materials and supporting information become the property of Stanford University once you submit them. Please note, Stanford does not claim any intellectual property interest in your submission.

Your application is for the degree program and entry term indicated on the Program Selection page. Changes to this information are not permitted unless approved by the department to which you are applying.

The application fee is \$125.00 USD and charged at the time you submit your application. The application fee may not be refunded under any circumstance, including withdrawal of the application from admission consideration prior to receiving a decision.

Out of the programs listed on the Program Selection page of this application, you may apply to no more than one program within an academic year (September to August). The only exception is within the Biosciences PhD programs, where you may apply for two programs within a single application. Violation of this policy will result in the administrative withdrawal of all subsequent applications submitted during the same academic year. The application fee will not be refunded for the withdrawn application(s).

Please note that your application materials and letters of recommendation, in addition to being used in the admission process for your selected graduate program, may be used: as part of another university selection process, such as a different graduate program, a research group or laboratory, a research or teaching assistantship, or an honor or award; in connection with academic mentoring during the period of your enrollment; or for financial support derived from any source available to Stanford.

Your recommenders must be the sole authors of your letters of recommendation. Drafting, writing, translating, or submitting your own reference, even if asked to do so by a recommender, is a violation of our application terms. You are responsible for informing your recommenders of this policy.

If you are offered admission, we want you to make an informed decision. For this reason, we may share limited information with Stanford alumni, students, and/or programs who may contact you to welcome you to the Stanford community and answer your questions.

If you are offered admission, Stanford reserves the right to withdraw that offer if: 1) you show a significant drop in academic performance or fail to graduate; 2) there has been a misrepresentation or material omission in, or a violation of, any of the terms of the application process; or 3) we learn that you have engaged in behavior prior to the first day of program attendance that indicates a serious lack of integrity or judgment. Stanford further reserves the right to require you to provide additional information and/or authorization for the release of information about any such matter, in connection with the review and processing of your application.

Your electronic signature below represents your agreement to the terms of this application and its instructions, and your confirmation/declaration that all of the information that you have provided in this application is your own work and, to the best of your knowledge, complete and accurate. Your signature also constitutes your consent to Stanford (or its agent) having the right to verify any information presented in or relating to your application.

Signed by: **Yahriel Salinas-Reyes**

Date: **11/22/2023**