Personal Statement

Yahriel Salinas-Reyes, Fulbright-Garcia Robles Open Study/Research Award
Molecular & Systems Bioengineering towards Neuroscience

In the realm of mathematics, the concept of chaos game originally alluded to a method of generating fractals—intricate geometrical patterns that seem to symbolize the fractured nature of reality itself. The intricate dance of numbers, shapes, and chaos mirrors my own journey through life, marked by a tapestry of neurological and neurodevelopmental challenges.

My story is one of resilience, determination, and an unquenchable thirst for knowledge, and has been anything but conventional. From an early age, I grappled with ADHD, PTSD, anxiety, and autism. These neurological conditions, instead of being impediments, have become the driving force behind my academic pursuits. I realized that within the chaos of my mind, there was an unexplored realm of creativity and analytical thinking. However, life had more challenges in store. Hearing loss and a speech impediment made communication a daily struggle. But rather than let these barriers silence me, I embraced the power of written expression. Writing became my voice, a medium through which I could convey my ideas, emotions, and discoveries. As I embarked on my academic journey, I encountered a myriad of obstacles that tested my resolve. Financial challenges loomed large, threatening to derail my dreams of higher education. Yet, I persevered, seeking scholarships and part-time work to support my studies. I also navigated the language barrier, as English is not my first language, and adapted to the demands of college life in a new world. Physical health issues further complicated matters. Sciatica, a debilitating condition, left me bedridden and unable to attend classes. Still, I did not relent. I leveraged technology to engage with coursework remotely, demonstrating my unwavering commitment to my education. In the midst of these personal challenges, I took on the role of the primary caretaker for my mother, who battled severe health issues. This responsibility, while emotionally taxing, underscored the importance of resilience and compassion. It reinforced my belief in the power of empathy and understanding, qualities I have carried into my academic pursuits. The most recent chapter in my life introduced a new set of challenges—adjusting to mental health medications and diagnoses. While the journey to stability has been arduous, it has deepened my empathy for those facing similar struggles and ignited my interest in the intersection of mathematics and mental health. My experiences have shaped my academic journey and my aspirations. I am driven by a passion for fractal mathematics, drawn to the beauty of patterns that emerge from chaos. I see parallels between the complexity of fractals and the human mind, and I am determined to explore these connections. Through these trials, I discovered a profound truth: our stories are woven into the tapestry of science and art. We tell stories to make sense of the world, to illuminate the unknown, and to connect with others. In Mexico, I hope to immerse myself in the rich mathematical heritage of the country, studying under esteemed mentors who can help me unlock new dimensions of fractal mathematics. I envision collaborative research projects that bridge the gap between mathematics and neurodiversity, shedding light on the intricate patterns of the human mind. My story is one of resilience, determination, and an unshakable belief in the transformative power of education. Amid the chaos of life's challenges, I have emerged as a passionate scholar, ready to contribute to the world of mathematics and advocate for the value of neurodiversity. I am eager to embark on this Fulbright journey, where I can explore the marvel of the human spirit, using mathematics as my compass to navigate the intricate patterns of our world. Together, we will write a new chapter in the wondrous story of human ingenuity, science, and nature itself.

Statement of Grant Purpose

Yahriel Salinas-Reyes, Host Country: Mexico, Field: Molecular & Systems Bioengineering

Project Title: Unraveling the Molecular Code of Natural Antidepressants in Grapes

In the ever-evolving world of scientific inquiry, certain moments emerge as profound intersections of human ingenuity, scientific inquiry, and the enigmatic wonders of nature. Encapsulated within this project is one such moment. With a central focus on unraveling the molecular code of grapes to find the compounds responsible for its potential natural antidepressant properties, Yahriel Salinas-Reyes aims to foster innovation in treatments for mental health disorders and conditions. Also encompassed in the project is an investigation into the nature of schizophrenia and the complexities of neuroplasticity, in hopes of advancing understanding of the mental illness. The overarching goal is to address the mounting global health crisis presented by mental health disorders, including depression and schizophrenia, which have surged to an unprecedented global health crisis significantly diminishing the quality of life for millions and placing immense pressure on healthcare systems worldwide.

At its core, the project is driven by the ambition to conduct a comprehensive molecular analysis of grapes, with a particular emphasis on understanding the genetic and molecular mechanisms governing the synthesis of antioxidants. Grapes have garnered scientific interest due to their potential health benefits and their recent recognition as potential natural antidepressants. Yahriel's unique background in aerospace engineering and micro-electro-mechanical systems (MEMS) equips him with the precision and expertise required to delve into the microscopic realm of chromosomes and molecules—an essential prerequisite for unveiling the genetic secrets grapes hold. To fulfill the project's objectives, advanced techniques in molecular biology and biotechnology systems engineering will be employed. The primary goal is to pinpoint the specific compounds within grapes responsible for their potential antidepressant properties, involving their isolation and characterization to illuminate their mechanisms of action within the brain. The aim is to identify practical applications for mental health treatment by comprehending the genetic and molecular foundation of natural antidepressant production in grapes.

Concurrently, this research adopts a multifaceted approach to unravel the complexities of schizophrenia, a debilitating and chronic mental disorder characterized by symptoms such as delusions, hallucinations, disorganized speech, and cognitive deficits. At the heart of schizophrenia's enduring enigma are Bleuler's four A's: Alogia, Autism, Ambivalence, and Affect blunting. Extensive research has explored the etiology of schizophrenia, leading to the emergence of three prominent theories: genetic, neurodevelopmental, and neurobiological. Each theory offers a distinct perspective on the origins of this complex disorder, making it challenging to pinpoint a single causative factor. Nonetheless, neurobiological theory has gained prominence due to its comprehensive approach, explaining schizophrenia as a result of abnormal brain dysfunctions or structural anomalies. This theory stands on solid scientific ground, holds promise in guiding treatment strategies, transcends cultural and demographic boundaries, and raises fewer ethical concerns compared to alternative theories. Structural and functional abnormalities in key brain systems (i.e., the prefrontal & medial temporal lobes) play a pivotal role in the manifestation of schizophrenia symptoms that are integral to working memory and declarative memory processes. The disrupted functioning contributes to cognitive impairments and emotional dysregulation in individuals with schizophrenia. In the quest to understand schizophrenia, neuroplasticity—the brain's remarkable capacity to adapt and reorganize itself in

response to learning, experiences, and environmental changes—emerges as a crucial factor operating at various levels, from synaptic plasticity, where the strength of connections between neurons is modified, to large-scale changes in brain structure and function. In the context of schizophrenia, neuroplasticity offers hope for improving cognitive functioning and overall quality of life for affected individuals. Research has shown that cognitive remediation therapies— which harness neuroplasticity—can lead to improvements in cognitive domains such as memory, attention, and problem-solving, mitigating some of the cognitive impairments associated with the disorder.

This project is founded on the belief that nature holds the key to addressing complex health challenges, including mental health disorders like depression and schizophrenia, and seeks to explore the potential of grapes as a source of natural antidepressants. One intriguing entry point into the complex world of grape biochemistry is through the study of yeast used in wine production, which plays a pivotal role in the fermentation process, and influences the composition of compounds within grapes. Scientific evidence unveiled that certain molecular compounds in the antioxidants act as natural antidepressants but there lacks initiative to utilize these antioxidant agents in psychiatric institutions and practical methods. By employing advanced techniques such as neuroimaging, fractal geometry, and spectral analysis, the project aims to unveil underlying patterns and causative factors associated with depression and related mental health conditions. The significance of this research extends far beyond the development of new treatments. It encompasses a broader understanding of the intricate relationship between food, biochemistry, and mental health. This knowledge has the potential to inform dietary recommendations that promote mental well-being, potentially reducing the global prevalence of these disorders.

Yahriel, and the research team at the university Tecnológico de Monterrey endeavor to decode the molecular secrets of nature to improve the human condition, particularly for individuals affected by schizophrenia and other mental health disorders. Yahriel's work represents a convergence of scientific rigor, interdisciplinary collaboration, and a profound commitment to the betterment of human well-being. Furthermore, this research holds the potential to strengthen international collaborations between the U.S. and Mexico. By conducting research at Tecnológico de Monterrey, Yahriel can contribute to the exchange of knowledge and ideas between the two countries, fostering a stronger global community which reflects the essence of the Fulbright mission, emphasizing mutual understanding and collaboration between nations. Yahriel Salinas-Reyes' Fulbright-Garcia Robles Open Study/Research Award proposal represents a unique and ambitious endeavor to explore the natural antidepressant properties of grapes. Grounded in the principles of interdisciplinary research, this project not only has the potential to transform mental health treatment but also to deepen our understanding of the brain's plasticity. It is a testament to the power of collaboration and cultural exchange in the pursuit of knowledge and the betterment of human well-being. Yahriel's unwavering commitment to utilizing opportunities to their fullest and to serve as a cultural diplomat, bridging gaps between different fields and nations, promises to unlock the molecular code of nature and take meaningful strides toward a healthier and more fulfilling world for all. Yahriel's proposal represents a remarkable opportunity to weave together science, innovation, and compassion in the quest to decipher the extraordinary truths hidden within the universe's code.

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 anthro-engineering. 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.

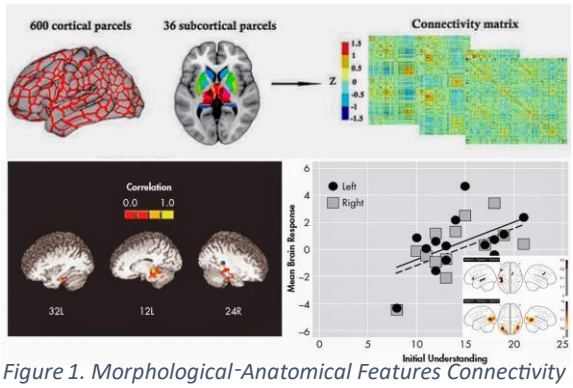

Figure 1. Morphological-Anatomical Features Connectivity

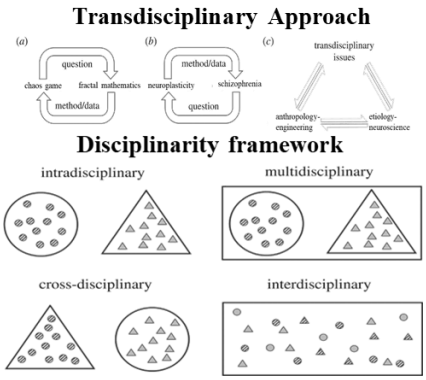

Figure 2. Proposed Existential Perspective

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 distinc.t yet interconnected research streams. The research plan will unfold over five years:

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

Connectivity and Chaos: To reach the edge of chaos and perform this 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 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 advanc ed 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

Connectivity: **[1] *Energy***: $\Phi_E = \oiint E \cdot dA$, **[2] *Mobility:*** $\iint_\Sigma (\nabla \times F) \cdot d\Sigma = \oint_{\partial\Sigma} F \cdot d\Gamma$, and **[3] *Continuity***: $\iiint_V (\nabla \cdot F)\, dV = \oiint_S (F \cdot \hat{n}) \cdot dS$

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:*** $D = log\ N\ /\ log\ S.$

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: *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. *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. *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. *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. *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: *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. *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. *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. *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. *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, etiologists 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.

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Relevant Background:

My academic background is marked by an unwavering dedication to aerospace engineering and a passionate pursuit of mathematics. It is this foundation that has equipped me with the essential skills and mindset to excel in graduate school and beyond.

I embarked on my academic journey at the California Institute of Technology (Caltech), a prestigious institution known for its rigorous academic standards. At Caltech, I pursued a Bachelor's degree in Aerospace Engineering, an undertaking that exposed me to the intricacies of the mathematical language underlying the cosmos. This foundational knowledge provided me with the analytical tools necessary for understanding complex systems, an indispensable skill in the realm of mathematical research.

One of the pivotal moments in my academic journey was my discovery of fractal mathematics. Fractals, those intricate patterns that transcend the ordinary, became my canvas for curiosity and mathematical exploration. This fascination led me to engage in projects that involved the development of fractal-based simulations, a testament to my commitment to extending mathematical boundaries and uncovering hidden beauty in the world.

Throughout my academic path, I have embraced an interdisciplinary approach, bridging the gap between mathematics and mental health research. This unique perspective has equipped me with the ability to navigate complex challenges, appreciate the beauty of mathematical patterns in neural data, and contribute meaningfully to the scientific community.

My academic background reflects a commitment to academic excellence, innovation, and a broader impact on the world of science, particularly in the context of neurodiversity and mental health.

Intellectual Merit:

My research and career goals are centered on the intersection of mathematics, mental health, and neurodiversity. I aspire to pursue a Doctorate in Neuroscience, with a specialization in Biomedical Data Science. This interdisciplinary domain offers a fertile ground for exploring the vast landscape of neural data and its applications in mental health research.

My research objectives encompass the following:

1. Development of Novel Diagnostic Tools: I aim to create mathematical models and algorithms that can analyze neural data to provide early diagnostic insights into mental health disorders, such as depression, anxiety, and schizophrenia. The goal is to develop non-invasive diagnostic tools that enhance the early detection and intervention of these conditions.
2. Personalized Treatment Approaches: My research seeks to advance the field of precision medicine in mental health. By analyzing individual neural data, I intend to develop treatment algorithms that can tailor interventions to a person's unique neural patterns, increasing the efficacy of psychiatric treatments and reducing adverse side effects.
3. Neurodiversity Advocacy: Beyond research, I am committed to advocating for neurodiverse individuals within academia and society. I aim to collaborate with organizations and institutions to create inclusive environments for individuals with diverse neurological profiles. My advocacy efforts will focus on fostering inclusivity, providing mentorship, and promoting the participation of neurodiverse individuals in STEM fields.

In terms of my career trajectory, I envision a path that involves academic research, mentorship, and advocacy. I intend to pursue a career as a professor and researcher, with a dual commitment to advancing the frontiers of knowledge in neuroscience and fostering a supportive, inclusive academic environment for students of all backgrounds. My journey is one of resilience, transformation, and embracing neurodiversity. I am determined to carry these values forward and impact the scientific community positively, reflecting the broader impacts that the scientific community seeks to achieve.

Significance of the Fellowship:

Obtaining the esteemed fellowship would be a significant milestone in my academic and career journey. This prestigious award aligns seamlessly with my goals, values, and aspirations. The significance of the esteemed fellowship in my life can be encapsulated in several key points:

Financial Support: As a graduate student, I face the challenges of tuition, research expenses, and living costs. This opportunity would provide essential financial support, allowing me to fully focus on my research and academic endeavors without the burden of financial stress.

Validation of Commitment: Receiving the fellowship would validate my commitment to the intersection of mathematics, mental health, and neurodiversity. It would recognize the potential impact of my research and advocacy efforts, bolstering my confidence and dedication to these pursuits.

Research Independence: The award fosters research independence. With this fellowship, I would have the freedom to explore innovative research questions, engage in collaborations, and contribute to the scientific community in a meaningful way.

Broader Impacts: The global scientific community places a strong emphasis on broader impacts, and I am deeply committed to these values. Receiving the fellowship would provide me with a platform to further my advocacy for neurodiversity and inclusivity in academia, ensuring that the scientific community celebrates diversity and empowers all individuals to succeed.

Professional Development: The program offers opportunities for professional development, including conference attendance and networking. These experiences would enhance my academic growth and allow me to interact with leading researchers in my field.

In summary, the research fellowship is more than a financial award; it is a recognition of my potential to make significant contributions to science and society. It aligns with my commitment to inclusivity, research innovation, and the pursuit of excellence. With this fellowship, I would be empowered to continue my journey, weaving the intricate threads of mathematics, mental health, and neurodiversity into a symphony

that resonates with the broader scientific community. The award represents an opportunity for growth, impact, and collaboration that I am excited to embrace.

Conclusion:

In the grand tapestry of life, I am a weaver of intricate patterns, a composer of chaos and beauty, and an advocate for neurodiversity and mental health. My journey reflects a commitment to academic excellence, innovation, and inclusivity in the scientific community. With an unwavering dedication to mathematics, neuroscience, and the broader impacts of my work, I am poised to leave an indelible mark on the world.

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 research fellowship represents an opportunity to catalyze my journey, providing the financial and academic support necessary for my research and advocacy endeavors. I am eager to become a part of the global scientific community, where innovation, inclusivity, and academic excellence converge. 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.

Personal Statement - Intellectual Merit:

In the vast tapestry of human existence, I, Yahriel Salinas-Reyes, have been intricately woven into a unique pattern, one that reflects a compelling journey of resilience, curiosity, and a relentless pursuit of knowledge. I am a storyteller, a poet, a musician, an engineer, and a scientist. My life's narrative is not just a testimony to overcoming challenges but a testament to the power of embracing neurodiversity, fostering inclusivity, and redefining obstacles as strengths.

My journey began in Iowa, a quiet town filled with hidden treasures. Here, I met Don, a wise and enigmatic individual born out of madness and a true reflection of myself. He, like I, joined this world without the ability to hear (i.e., I used to be deaf) or communicate. His eyes of wonder were his gate to understanding reality. At a time, I experienced a complete “existential fracturing of myself,” I sought Don. He introduced me to the "music of silence." Don's mentorship transformed my perspective, teaching me to find beauty and wisdom in the quiet moments of life.

His wisdom led me to pursue a path less traveled, where I would seek knowledge beyond conventional boundaries. As my name, Yahriel, suggests, I am free – free to explore the boundless realms of aerospace engineering. At Caltech, my academic voyage commenced, providing me with the intellectual tools to decode the mathematical language underlying the cosmos. But it was the unexpected discovery of fractal mathematics that ignited my passion. Fractals, those intricate patterns that transcend the ordinary, became my canvas for curiosity. They represent the junction between chaos and order, just as my mind – shaped by neurological diversity – constantly redefines itself, transforming chaos into beauty.

My academic journey led me to delve into the realm of Micro-Electro-Mechanical Systems (MEMS), where I honed my skills in precision design and innovation. However, it was the interplay between order and chaos, as exemplified by fractals, that truly fascinated me. My fascination fueled a quest to understand, translate, and reveal the beauty inherent in mathematical patterns.

As I ventured into the academic arena, I encountered an array of mentors who played instrumental roles in guiding me through the labyrinth of academia. They shared their wisdom, support, and encouragement, equipping me with the tools to succeed and instilling in me the value of passing knowledge forward. Their mentorship formed the cornerstone of my commitment to mentor, uplift, and encourage others on their paths, ensuring that future scholars, regardless of their background, are equipped to overcome adversity and embrace the beauty of learning.

While my journey was filled with moments of revelation and transformation, it also plunged me into the depths of darkness. Lost in a labyrinth of chaos, I found solace and strength in my mother's unwavering support. Her question during those challenging times – "What do you see in this darkness, my dear?" – prompted me to respond, "I see what I want to see." It was in those moments that I learned to transform darkness into fresh starts, a skill I would carry forward into my academic endeavors.

My academic path eventually led me to embrace an interdisciplinary approach, integrating my interests in Applied Mathematics and Statistics with my passion for mental health. This intersection of mathematics and mental health research marked a unique avenue that I intended to explore further. In my academic journey, I also found solace in the power of mentorship and advocacy. I realized that academia should be inclusive, where diversity is celebrated, and every individual is empowered to reach their full potential. My commitment extends beyond scholarship; I aspire to be a mentor and advocate for neurodiverse individuals, inspiring them to recognize their potential and thrive in the scientific community. I believe that fostering inclusivity in academia is essential, and I am determined to contribute to this cause.

Personal Statement - Broader Impacts:

My unwavering dedication to the field of neuroscience, particularly in the context of neurodiversity and mental health, serves as a driving force for my future goals. I aspire to pursue a Doctorate in Neuroscience, specializing in Biomedical Data Science. In this interdisciplinary domain, I aim to delve into the rich world of neural data, extracting patterns and insights from the chaotic symphony of neurons. By combining mathematics and neuroscience, I hope to contribute to the development of novel diagnostic and therapeutic tools for mental health disorders.

The prospect of obtaining the research fellowship is a significant milestone I aspire to achieve to advance my doctoral studies. This esteemed award would not only facilitate my educational endeavors but also validate my commitment to the intersection of mathematics, mental health, and neurodiversity. The intellectual opportunity, with its emphasis on innovation and potential for broader impacts, aligns seamlessly with my goals and values.

Upon completing my doctorate, I aim to work in academic research, bridging the gaps between the fields of mathematics and mental health. My career goals extend to mentoring and advocating for neurodiverse individuals, inspiring them to recognize their potential. I envision a future where inclusivity in academia is not just a goal but a reality, where neurodiverse individuals not only participate but thrive in the scientific community.

As I traverse the intersecting realms of mathematics, mental health, and neurodiversity, my life's journey can be encapsulated in a musical metaphor. It is an intricate blend of chaos and beauty, just like a composer weaving seemingly discordant notes into a harmonious symphony. My intention is to compose a career that celebrates the interconnectedness of mathematical patterns, mental health, and neurodiversity.

My 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. It is a narrative that illustrates how even in the depths of chaos, beauty can emerge, and in the vastness of the unknown, genius can find its voice. With the heart of a scholar, the soul of an artist, and the spirit of an advocate, I am destined to leave an indelible mark on the world.