GymACT

NAME: Marshall Burrows

PROGRAM: Rocky Mountain Mavericks

MAJOR/AREA OF PROFESSIONAL DEVELOPMENT: Biological Engineering

GPA (if applicable): 3.99

FIVE BEST ACCOMPLISHMENTS:

Coaches, this should be a minimum. Feel free to include any other documents, flyers, or accomplishments. Remember this is your chance to sell your nominee. Please make a copy of this google doc and submit it into the 2024 - N2 AWARD folder.

1. Marshall has been an officer for Utah State University Club Gymnastics for three years. In that time, he held the position of a secretary his first year and the following two years he has been the co-president. During his presidency, he has grown the club not only from a numbers state but also from a skill level perspective. He has helped his team become financially stable through fundraisers. He increased awareness and engagement between the club team and the USU women's NCAA gymnastics program. With collaboration from other officers, club athletes can now use the on-campus varsity gym, making the club more accessible to the student body and club gymnasts can use high quality equipment. Additionally, Marshall has organized travel to regional and national NAIGC competitions, including travel to Boulder, Albuquerque, Memphis, and Milwaukee. Furthermore, he has worked with current club gymnastics members to ensure a smooth transition once he graduates from Utah State.

2. This year, Marshall was given the opportunity to be a part of the broadcast team for the USU women's NCAA gymnastics team, where he had a direct involvement with preparing for competitions and commentating on the Mountain West Network as the USU varsity team competed at their home meets. He talked with the USU coaches before the meet to understand their goals and deliver engaging commentary during the meet. He also interviewed

head coach Kristin White for a post-meet analysis. The Utah State coaches praised Marshall's broadcasting and asked for him to commentate the inaugural Mountain West Championships.

3. Marshall has been a part of the Rocky Mountain Mavericks for four years. In that time, he has grown into a true leader and one of the most consistent athletes on the team. He is the captain for the Utah side of the team and is always showing his ability to lead through his gymnastics. In competition, he is calm, cool, collected, and has sticky feet. Last year, he picked back up rings and high bar to fill holes in the RMM lineup when his teammates were injured. At NAIGC Nationals in 2023, he placed fourth in the all around for USU Club Gymnastics. In addition, being a part of the Utah side of RMM has meant he trains separately from his teammates. For the past two years, he has trained without any RMM teammates in Utah; however, he has faced this adversity head on and never allows for the separation to deter him from achieving his gymnastics goals. Finally, his commitment to academics, research, and mentoring has also limited his hours in the gym.

4. On top of all of the things that Marshall has done in the gymnastics community, he is also a star in his academics. He has been involved in research for all four academic years with the Vargis Lab at USU. He is a contributor to a published paper that focused on using recombinant hagfish proteins to create membranes that better represent subretina for research modeling age-related macular degeneration (https://pubs.acs.org/doi/10.1021/acsbiomaterials.3c00411, Acknowledgements section). Since the paper was published, Marshall has worked under a graduate student to use the membranes to create an *in vitro* disease model for age-related macular degeneration. He is also a part of the undergraduate-research fellowship program that gives a scholarship from the university to pursue his passion for research in disease modeling and tissue engineering. Additionally, Marshall has worked on a capstone project using subcritical water hydrolysis on algae to create cell culture growth media for lab-grown meat. For this project, Marshall has worked with other Biological Engineering students to find the optimal conditions to create products from hydrolysis that can support cell cultures. Upside Foods hopes to use these algal products to grow meat in a lab as an alternative to traditional livestock. He had the opportunity to present his work on this project at the Utah Conference for Undergraduate Research in February this year.

5. Whether it is inside or outside of the classroom, Marshall is also a leader amongst his peers. He is a mentor to numerous students within his department. Through his mentorship, he has educated and guided individuals through the rigors of being a Biological Engineering student. Also, he was a teaching assistant for two separate classes: Thermodynamics and Engineering Quantification of Biological Processes. During Marshall's time as a teaching assistant, he worked with professors on developing the curriculum and exams, held office hours for students, and

led some lectures when professors were unavailable. He also is a Technical Writing Consultant in the USU Engineering Writing Center where he works with fellow engineering students on bettering their technical writing for future work in industry. As the co-president of USU Club Gymnastics, Marshall has . Lastly, during his time as a researcher, Marshall has had the opportunity to work with underclassmen on projects and teach them proper laboratory practices and procedures. Overall, Marshall has demonstrated a passion to educate others both inside and beyond the classroom.

6. Last but not least, he most recently passed the Fundamentals of Engineering exam, which is the first step towards becoming a licensed professional engineer. This a huge accomplishment as many engineers take this exam once they are graduated and working in the industry.