

AaroHi Gaikwad (Fall 2026)

STATEMENT OF PURPOSE

Growing up, I have always been a very enthusiastic and curious kid. I have been brought up in a secure, loving and a very supportive nuclear family. I am lucky to have my parents as my biggest cheerleaders, best friends and mentors. Education has always been a top priority. I first fell in love with biology because of my mother, who herself is a Microbiologist. Visiting her laboratory as a child, fostered my curiosity and familiarity with Biology, which later evolved into a career path I am deeply committed to.

I have explored diverse interests throughout my childhood including, theatre, Bharatnatyam (a classical dance form), music, football, badminton, swimming and drawing. I discovered my passion for Mountaineering in 7th grade through which I summited Himalayan and several peaks in the Sahyadri Ranges of Maharashtra. It has instilled in me a mindset of team work, consistency, mental strength and the motto; “**Enjoy the Discomfort**” has been deeply engraved in me at a very young age and it continues to shape the way I view and overcome challenges in life. I am also passionate about writing, and I was awarded **AIR 1 for my essay on “Kitchen Science”** at Savitribai Phule Pune University (SPPU) in 2019.

I learnt **elementary level German in my school days along with Sanskrit** (an ancient Indian language) as both these languages have always intrigued me. **12th grade was the greatest turning point of my life.** I faced a setback in my HSC boards, and that is what taught me perseverance and dedication. Since then, I have been consistent in my academics, now standing at a **CGPA of 8.98** in my 2nd year of Biotechnology at **MES Abasaheb Garware College, Pune** affiliated to Savitribai Phule Pune University. I have been actively pursuing extra-curricular courses and internships at national institutes.

I strengthened my basic laboratory skills like dilutions, conversions, etc. through my **internship at Sheetal Laboratory, Pune** (May 2024). An **On-job Training** at the Genetics and Plant Breeding Group, **Agharkar Research Institute (ARI)** in June 2024, helped me learn about techniques like PCR, HPLC, GCMS, Sanger Sequencing, NMR & many more, under the guidance of Dr. **Ravindra Patil (Scientist E)** and Dr. **Manoj Oak (Scientist E)**.

In 2024, I completed a **1-month course on Scientific Writing** which helped me read & write research papers, review articles, research blogs & proposals. I also participated in hands-on **CRISPR-Cas9 workshop at Indian Institute for Science Education and Research (IISER) Pune**, as well as an advanced analytical instrumentation workshop on **HPLC, GC-MS and LC-MS workshop at ARI** in 2025.

This year, I got selected for an **internship at IISER Pune**, under **Dr. Nishad Matange (Assistant Professor and DBT/Wellcome India Alliance Intermediate Fellow Department of Biology)** and **Arsh Chavan Cofounder of Biofound Biotech Pvt. Ltd.** I got to actively work on a research project, where I designed the workflow and experiments, carried out lab work for **Screening and isolation of microbes capable of degrading Volatile Organic Compounds**. I gained extensive exposure to literature review, assay optimization, data analysis and most importantly Microbiological Techniques like bacterial isolations, Minimum Inhibitory Concentration assays and Adaptive Laboratory Evolution. I got the opportunity to attend various talks at IISER Pune during this internship on research of international scientists. **I was offered an internship extension** by Biofound Biotech at IISER Pune and ever since, I have been working (part-time) on the **provisional patent filing, where I am listed as the corresponding investigator**. I have contributed to IP documentation and data analysis.

Additionally, **I represented SPPU & MES Abasaheb Garware College at the KISAN Convention (India's Largest Agricultural Convention)**. I engaged as a student volunteer to demonstrate **Rhizobium isolation from a biofertilizer** to highlight the benefits of using biofertilizers and displayed a test that could be performed at home using **Potassium Permanganate to estimate the active carbon content** in soil under the guidance of **Dr. Mrunal Damle** (Assistant Professor at Abasaheb Garware College), **Dr. Priyanjali Dixit** (Head of Biotechnology Department) and **Dr. Vaijayanti Tamhane** (Assistant Professor at Institute of Biotechnology and Bioinformatics, SPPU). Our work created a positive impact on farmers and it was a surreal experience, being able to help the providers of our society. This helped me enhance my science communication skills. I was able to explain complex scientific terms to the general public efficiently. I published an article on my experience with working for the KISAN Agricultural Convention in our college newsletter; "**BioQuest**".

I have always loved helping others, and working for the environment. In 2023, I was a part of the **River Bank Conservation Rally organized by the Pune River Revival (NGO)** and also participated in **National Service Scheme (NSS)** campus cleaning, environment conservation awareness drives, conducted at my college. During my bachelor's, I also conducted two surveys, one on **"The correlation between plants and mental health"**, and another on **"Awareness of Antimicrobial resistance"** to raise awareness within my community. In my third year, I volunteered with **Swanand Janakalyan (NGO in Pune)**, where I taught Biology to underprivileged children.

All these academic endeavours have made me realise that **Biology makes me feel most alive and constantly pushes me to be a better person.** I want to channelize my passion for Biology into something that can make a real-world impact and that is the reason why I have decided to pursue my Masters in Ireland. The country will offer a **safe, diverse, nurturing environment and bring out the best in me.** Studying abroad is also crucial for opening doors to bigger opportunities.

I want to pursue my masters from University College Dublin as I am interested in Molecular biology, Microbiology and Industrial Biotechnology as well. **UCD modules offer the best combination.** I am confident UCD will help me strengthen both theoretical and practical skillset. Beyond academics, I also want to be a part of **UCD's diverse student community.** I want to participate in societies that will help me enhance my team work, community engagement and creativity. The Scientific, Harry Potter, German and Music societies at UCD will definitely help me achieve that. This is why I truly believe UCD will **foster both my academic progress and personal development.**

My journey so far, has made me capable of adapting, learning & staying persistent, I believe these qualities will be essential in research. Given a chance to study at your esteemed university, **I promise to contribute to research with all my strength, resilience & passion.** I am to learn, contribute & be a part of the dynamic UCD community.

Thank you for considering my application.