

# Aakanksha Singh

✉ aakanksha.singh@kgu.de  
🌐 aasingh2.github.io

in aakanksha-singh-a1b850139  
🌐 github.com/aasingh2

---

## Education

### PhD candidate in the group of Computational Immunology

April 2022 - March 2025 (Expected)  
Goethe University, Germany

### Erasmus Mundus Masters in Evolutionary Biology(MEME)

September 2019 - September 2021  
University of Groningen, The Netherlands and GPA: 8.2/10  
University of Montpellier, France

### Bachelor of Science (Hons.) Zoology

August 2016 - July 2019  
University of Delhi, India GPA: 8.9/10

## Personal Statement

As a computational biologist, I am deeply passionate about analysing multi-omic data. I find great satisfaction in utilizing graphs to visually communicate complex data. My personal objective is to create open-source, user-friendly packages for comprehensive multi-omic data analyses. Moreover, I strongly believe in the value of interdisciplinary research that promotes openness, reproducibility, and collaboration.

## Technical Skills

**Bioinformatic specialities:** Genomics, Transcriptomics  
**Languages/Tools:** R, BASH, JAVA, HTML, Mathematica, MySQL, Latex.

## Experience

Internship **UNIL**  
Lausanne, Switzerland March 2020 - August 2021  
**Thesis Project:** Balancing selection at the 'social supergene' in the Alpine silver ants  
• Finding signatures of balancing selection at the supergene in *Formica selysi* by analyzing diversity, divergence and deviation from neutral evolution in populations with different geographical origins.

Internship **CNRS**  
Montpellier, France September 2020 - February 2021  
**Thesis Project:** Estimating the micro-indel mutation rate in *Plasmodium falciparum* using genomes from mutation accumulation experiments  
• Developed a pipeline for variant discovery in non 3D7 strains of *Plasmodium falciparum* and then calculated the micro-indel mutation rate in 5 distinct strains of *Plasmodium falciparum* that have different geographical origins.

Internship **INRAE**  
Montpellier, France April 2020 - June 2020  
**Project:** Characterizing the Genetic Architecture of host plant adaptation in the invasive fruit fly *Drosophila suzukii* based on an Evolve and Re-sequence experiment.  
• Analyzed the pool-seq data of 11 populations of *D. suzukii*, for generations 0, 12 and 29 to provide insights into the evolutionary potential of fruit oviposition preference and larval performance of this species.

Internship **Dept.Of Biotechnology,Govt.Of India**  
New Delhi, India January 2019 - April 2019

**Project:** Study of the Physio-Chemical Parameters and Invertebrates of River Yamuna by analysing the water and soil samples under the microscope.

Summer Internship  
New Delhi, India

**Dept.Of Biotechnology,Govt.Of India**  
June 2018 - July 2018

**Project:** Comparative genome analysis of 161 strains of *Mycobacterium tuberculosis* to study the total drug resistance and 8 strains of *Tessaracoccus* species to explore the possibility of it being a potential PAO.

### Awards and Scholarships

- Received the Erasmus Mundus Scholarship (EMJMD) worth EUR 49000 for the duration of the Masters program (2019-2021).
- Awarded the Principal's medal for 'Outstanding Female Student (2016 - 2019)'.
- Received the Swiss European Mobility Programme (SEMP) scholarship worth CHF 2200 for conducting research at the University of Lausanne (2021).
- Received a scholarship worth INR 30000 under the 'Kanya Vidya Dhan' scheme to award meritorious girl students from the Government of Uttar Pradesh, India (2015).
- Received EFIS EJI travel grant worth worth EUR 170 to attend ENII Summer School (2023).
- Received a scholarship worth INR 3000 to buy academic books from the University of Delhi for being among the top scorer (2017).
- Letter of appreciation from the then Education Minister of India Ms. Smriti Irani (2015).

### Conferences and Summer Schools

#### 16th ENII EFIS EJI Summer School on Advanced Immunology

Location: Alghero, Italy  
Date: 12 May 2023 - 19 May 2023

#### GTIPI(Genomics and Transcriptomics, Integrated with Proteomics and Medical Informatics) Summer School

Location: Mainz, Germany  
Date: 29 May 2022 - 3 June 2022

#### 4th Rhein-Main Cancer Retreat

Location: Glashütten, Germany  
Date: 16 March 2023 - 17 March 2023

#### 10th UCT Science Day

Location: Frankfurt am Main, Germany  
Date: 29 June 2022

#### INSCR International Conference

Location: Bhubaneswar, India  
Date: 26 September 2018 - 27 September 2018

### Extra Curricular Activities

- **Campus Ambassador** of iSafe-The Safer India Challenge 17-18 conducted by IRSC in collaboration with MoRTH to make Indian roads safe.
- **Socio-scientific debate(2017)** secured 1st position.
- **Volunteer at Umeed(2016)**, an NGO to teach underprivileged children.