Swathi Ramapuram
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Academic objective

Prospective bioinformatician seeking a Ph.D position to enhance my skills and scientific knowledge in the research field and to apply my expertise to the advancement of life-science research.

Key skills and experience

- Extensive research experience analyzing NGS data of microbiome and transcriptome to identify genotypic differences between different accessions.
- Solid understanding of -Omics data analysis, Machine Learning techniques, host-microbe interactions, and strong programming skills.
- Strong foundation in molecular biology, genetics, and bioinformatics and can compete with complex biological data sets.
- Excellent technical, computer research, analytic, and communication abilities.

Education

11/2022 **M.Sc. Crop Sciences**

University of Hohenheim, Germany

Major: **Plant nutrition and protection**

Thesis: Investigating host genotype-specific responses to a bacterial community in *Lotus japonicus* by integrated analysis of transcriptome and microbiome data.

Grade: 1.8

06/2018 **Bachelor of Science in Agriculture**

Acharya N.G. Ranga Agricultural University, India

Major: **Agricultural sciences**

Average grade: 8.33

06/2012 **Abitur** (approximate equivalent to A-levels)

Average grade: 89.9%

Work experience

03/2023- 12/2023 **Researcher**
Austrian Institute of Technology, Austria

- Conducted bioassays to improve the microbiome resilience in wheat by identifying growth promoting bacteria using plant assays, microbial extraction, sequencing, and metagenomic analysis.

05/2022-12/2022 **Student research assistant in Dr. Aline Koch group**
Institute of phytomedicine, University of Hohenheim, Germany

- Working with the group which focused on developing RNA interference as an insecticide and experienced in RNA extraction, dsRNA synthesis, gene expression analysis using RT-PCR, insect bioassays, and stink bug breeding.

08/2021-04/2022 **Research intern at Dr. Stig U Andersen lab**
Department of Molecular biology & Genetics, Aarhus University

- Mastered in analysis of microbiome and RNA-seq data.
- Capable of performing NGS data analysis using R and python
- Skilled in programming, statistics and analysis of large-scale data using high-performance computing cluster.

02/2021-05/2021 **Research intern,** Julius Kuehn Institute, Germany.

- Investigating the transmission mechanism of the soil borne barley mosaic virus between its vector, fungus - like micro-organism and its host, barley.
- Expertise in the cultivation of bacteria and plants, DNA/ RNA extraction, PCR/ qPCR, different cloning techniques including GATEWAY, Confocal laser microscopy.

01/2018-06/2018 **Agriculture Experience Learning program,** Acharya N.G. Ranga Agricultural University, India

07/2016-12/2017 **Rural Agricultural Work Experience**, Acharya N.G. Ranga Agricultural University, India

Additional skills and information:

Awards - Bayer scientific fellowship (Jeff- Schell fellowship), Bayer AG, Helmut Aurenz scholarship for master's thesis, STIBET, DAAD-Germany, Erasmus+ grant for internship at Aarhus University.

Computer skills - NGS data analysis, -Omics data analysis with RStudio, Machine learning (working knowledge), MS-office.