Swathi Ramapuram

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Academic Objective

Prospective bioinformatician seeking a Ph.D. position to enhance my skills and scientific knowledge in microbiome research and to apply my expertise toward the future development of sustainability.

Key Skills and Experiences

- 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, plant-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** (Grade:1.8) 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.
06/2018	**Bachelor of Science in Agriculture** (Average Grade: 8.33) Acharya N.G. Ranga Agricultural University, India Major: **Agricultural sciences**

Work Experiences

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, & 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 - Office 365, RStudio, Python, GitHub, Linux (working knowledge), qiime2.