# Salwin Maliakal Shaju

## **Work History**

11/2023

- 03/2024

### Sustainable Farming Intern: Maize and Wheat

BASF Digital Farming GmbH, Cologne, Germany

- · Procurement and maintenance of herbicide data.
- Quality assurance of product data to create digital herbicide recommendations.
- Documentation of control systems to create smart thresholds for OneSmartSpray.
- Improvement of the onboarding process for new employees.

10/2023 - 03/2024

## Master Thesis in Precision Agriculture : Winter Wheat Trial

Technical University of Munich, Freising, Germany

- Extensive use of R for efficient data management to support decisionmaking and reporting.
- · Hypothesis Testing:
- Anova
- · Post-Hoc test
- · Paired t-test
- Modeling
- · Regression Analysis
- Prediction & Validation
- · Zonal Statistics (QGIS and R)
- QGIS & R: Parameter Extraction, VIs and CHM, from Multispectral and RGB Drone Images (Ortho Mosaic).
- Deduced Canopy Height Model from = DSM-DEM
- Packages: "raster," "rgdal," and "exactextractr" (R Library)
- Know-how in Generating Shape-files
- Final Grade; 1.7

08/2022 - 09/2023

#### Research Assistant: Maize Trial

Technical University of Munich, Freising, Germany

- Data collection in field and greenhouse experiments: Conducted measurements of maize traits, such as early and final plant height, determination of the developmental stage, assessment of the chlorophyll content, evaluation of flowering time, and assessment of root traits.
- Laboratory work: Prepared maize leaf samples for various analyses, including DNA extraction and microscopy. Use of software like ImageJ to measure stomata size and number.
- Data analysis and reporting: Performed in-depth statistical analyses of large maize phenotypic datasets using the R programming language.
   Interpreting results, comparing them to existing literature, and producing a comprehensive report.
- Field trips: Embarked on field trips across Germany to support maize research initiatives, collaborating with experts in the field and gaining valuable insights.

06/2023

- 09/2023

#### **Research Assistant: Winter Wheat Trial**

Technical University of Munich, Freising, Germany

- Assisted in implementing effective weed management practices for wheat and potato fields.
- Participated in collecting and processing research data for winter wheat,



## **Personal Info**

**Email** 

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#### **Skills**

Statistical software: Fluent in R

Scrum Tools: Jira & Confluence

Microsoft office 365

G-Suite

Competent in QGIS

Python(Basic)

**Project Management** 

## Language

German - B2

English - C1

Hindi - B2

Tamil - B2

Malayalam - C2

#### Interest

- Reading and watching mystery books or lectures, e.g. "The Power of Your Subconscious Mind."
- Learning new things; typing (62 wpm), Rubik's Cube (one minute).
- Writing quotes and short poems in my language.

paying meticulous attention to details and accuracy.

- Know-how in operating advanced precision farming equipment, including;
  LAI-2000 Plant Canopy Analyzer, SPAD-502 Chlorophyll Meter, ASD
  FieldSpec Spectrometer, LI-6800 Portable Photosynthesis System.
- Supported drone flight missions by arranging field setups involving ground control points and reflectance panels.

**Education** 

10/2020

Horticulture, Master of Science

- 03/2024

Technical University of Munich(TUM), Freising, Germany

Final grade: 1.8

07/2015

Agriculture, Bachelor of Science

- 05/2019

Tamil Nadu Agriculture University(TNAU), Trichy, India

Final Grade: 2.5

**Awards** 

2022

Scholarship for International Students(TUM)

2016

Indian Council of Agriculture Research (ICAR) National

**Talent Scholarship** 

**Certificates** 

09/2018

**Trainning on Organic Terrace Gardening** 

09/2019

Participation in National Conference on "Farmers Orientation towards Climate Change and Upgradation to

Sustainable Agriculture"

 Games; Carroms, chess and soccer (position: defender)