

# Saklain Niam

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Github: <https://github.com/saqlineniam>

## Education

### Bachelor of Science in Food Engineering and Tea Technology

2024

Shahjalal University of Science and Technology (SUST), Sylhet, Bangladesh

CGPA: 3.46/4.00

Relevant Courses: Food Chemistry, Food Biochemistry, Principle of Food Engineering, Food Processing and Preservation, Food Microbiology, Technology of Fish and Meat Products, Nutrition and Public Health, Technology of Dairy Products, Instrumental Method of Food Analysis, Food Packaging, Cereal Legumes and Oil Seed Technology.

## Standardized Test Score

GRE Overall Score: 306 (Quantitative Reasoning: 162, Verbal Reasoning: 144, Analytical Writing: 3.0)

IELTS Overall Score: 7.0 (L: 7.5, R: 8.0, W: 6.0, S: 7.0)

November 2024

## Undergraduate Thesis

### Impact of Alginate, Guar Gum, Pectin-based Edible Coating on the Shelf Life of Strawberry

- Researching conjugating functionalities within a matrix to enhance its effectiveness during preservation trials.
- Performing Physicochemical and bioactive compound (DPPH, TPC) analysis at 2-day intervals, weights regularly.
- Performing Tukey's test and ANOVA to determine the significance and correlations in collected data.

## Undergraduate Project

### Plant Layout Optimization for PinePlus Probiotic Pineapple Juice Manufacturing

August 2023

- Developing a functional juice by optimizing ingredient formulations, fermentation processes, and shelf-life stability.
- Designing production layouts to enhance workflow efficiency, raw material handling, processing, and packaging.

## Seminar

Online Participation, **Development and Industrialization of International Tea Trade for Belt and Road Countries**,  
Zhangzhou College of Science and Technology, Fujian, China

November 2022

## Research Training

### Training in Quality Control and Unit Operation in Food Industry, TICI

January 2023 - February 2023

- Operation and application of analytical instruments such as GC, HPLC, Spectrophotometer, and Viscometer.
- Application of analytical techniques including ICP-OES, and FTIR for packaging and minerals detection.

**Agro-Processing, Preservation, and Marketing** (1 week), Bangladesh Rice Research Institute

November 2022

## Skills

**Chemistry:** Gravimetric, Titrimetric, and Spectrophotometric analysis; Determination of protein, fat, ash, and fiber; Estimation of vitamin C and reducing sugars; Edible oil and fat analysis; Extraction of bioactive compounds (polyphenols, flavonoids, alkaloids, etc.); Texture analysis; Viscosity determination; Analysis of bioactive compounds.

**Microbiology:** Basic microbiological sampling; Isolation, characterization, and identification of pathogens; Selective media and culture media preparation; Microbial colony counting; in vitro and in vivo analysis.

- Programming languages: C++, Python.
- STATA, MATLAB, and Excel for data analysis, with an understanding of predictive models.

## Extracurricular Activities

**Publication Secretary**, Shikorh Cultural Club, Shahjalal University of Science and Technology