

SARAH MARY JACOB

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EDUCATION

Master of Science- Biomedical Engineering 2021 - Present | Ghent University, BE; Dissertation- TU Delft, NL

Estimated Graduation: February 2024

Bachelor of Engineering- Mechanical Engineering 2014 - 2018 | Stony Brook University, USA

Dean's List 2014, 2016, 2017, 2018. Graduation: December 2018

SKILLS

Software

- Design Spark
- NX 10 Siemens PLM
- AutoCAD/ fusion360
- ImageJ
- LabVIEW
- G-Code

Programming Languages & Hardware

- MATLAB
- Python
- HTML5
- Raspberry Pi
- Arduino

Language and Other Working Skills

- **English** – Fluent
- **Hindi** – Fluent
- **Korean, French, Dutch** – Elementary
- Research
- Prototyping

WORK EXPERIENCE

Engineer (Technical Staff) – July 2020 – July 2021 | Daeyee Engineering (대의 엔지니어링)-South Korea

Design of systems and equipment used to reduce time and effort required during construction of buildings. Tableform design and placement for construction and maintenance of buildings.

Research Assistant (Intern) – January 2019 – April 2020 | Ghent University Global Campus-South Korea

Developed automated systems (for previously manual tasks) for the Lab of Plant Growth Analysis, thus reducing time spent for measurement and analysis.

RESEARCH AND DESIGN EXPERIENCE

Design Project –September 2023- February 2024 | Mechanical Ankle-Foot Orthosis

Worked to design a mechanical ankle-foot orthosis for an existing reciprocating gait system. The AFO design can be used by individuals of various shapes and sizes; additionally, it provides a more natural gait, dorsiflexion assist, and push off assist.

Research project –January 2019- April 2020 | Plant Growth Analysis System

Worked to design and implement a system that automatically gauges the length of coleoptiles growing in the dark and uploads the data to a computer to save researcher time and avoid plant destruction.

Created a website (based off a program) that measures the length of coleoptiles and seedlings automatically when an image is uploaded, thus making it accessible to all.

Research project –2018 | Smart Farms

Worked to design and implement a smart farm system that uses solar panels to automatically harvest sunlight not needed by plants, thus doubling land output.

Design project – 2018 | *Portable CNC Machine*

Worked in a group to create a portable and affordable CNC machine, to be used by hobbyists, and teachers to inculcate machining practices in students.

Project Coleader – 2015-2016 | *LEAD Lab. Incheon, Korea*

Managed and collaborated with a team of fellow students to create an accurate indoor navigation system. We created a pocketable device that could provide the user's indoor location based on their altitude and GPS.