

Shiva Sai Yeshala

+1 352-709-8523 | Gainesville, FL

www.linkedin.com/in/yeshalashivasai | yeshala.shivasai@ufl.edu

Master of Science, Chemical Engineering

University of Florida – Gainesville, USA

Aug 2022 – Present

CGPA – 3.77/4.00

Course work: Semiconductor Device Fabrication Lab, Advanced Mathematics, Transport Phenomena, Advanced Chem Bio Lab, Reactor Design and Optimization.

Bachelor of Technology, Chemical Engineering

Osmania University – Hyderabad, India

Aug 2017 – Jul 2021

CGPA – 8.09/ 10.00

Course work: Process Modelling and Simulation, Material Science and Instruments, Heat Transfer, Mass Transfer, Fluid Mechanics, Thermodynamics, Chemical Reaction Engineering, Plant Design and Economics, Process Dynamics and Control.

Work Experience

Graduate Research Assistant – Quanta Lab

Nov 2022 - Present

- Literature review on the MoTe₂ field effect transistors and nano electromechanical resonators.
- Acquired in depth knowledge on Semiconductor Fabrication Technology and Nano/Micro Electromechanical Systems fabrication.
- Gained knowledge on FET, CMOS, BJT, SET.

Project Engineer – Emerson Automation Solutions

Jul 2021 – Jul 2022

- Worked on Leak Detection System (LDS) for oil and gas pipelines.
- Configured LDS in UTN (UkrTransNafta) Project where pipeline extends from Belarus to Slovakia.
- Configuration includes building the model using Emerson’s pipeline simulation tools and performed leak tests by data analysis.

Process Intern – IICHE Collaboration with ANEXAS Europe

May 2020 – Jul 2020

- Worked on a project to increase the production of Polyethylene Terephthalate (PET) under ANEXAS Europe using Six Sigma.
- Analyzed production data set of PET using statistical tools Minitab and JMP.
- Optimized Polyethylene Terephthalate (PET) yield by 6.25 % using DMAIC process.

Projects

Semiconductor Device Fabrication

- Fabricated PN junction diode and gained hands on experience with the processes such as Photolithography, Spin-coating, Wet and dry etching, Doping, Diffusion, Sputtering and Physical Vapor Deposition.
- Handled equipment’s like Filmetrics, Dektak Profilometer, RIE-Asher, Thermal furnace, Physical Vapor Deposition system along with handling of wafers in a cleanroom of **Class 100**.
- Characterized the fabricated devices using Scanning Electron Microscope (SEM), Profilometer, and semiconductor parameter analyzer (probe station).

Manufacture of Dimethylformamide

- Thesis on “Manufacture of Dimethylformamide” where DMF is widely used as solvent in various industries.
- Performed Material and Energy balance calculations for each process involved in the manufacturing.
- Designed efficient process flow for capacity of 408 kg /hr. of DMF and applied six sigma tools to reduce the defects in the final output product.

Skills

Certifications: Six Sigma Yellow Belt Certificate (ANEXAS Europe)

Technical Skills: Photolithography (spinner, exposure tools), Thin-film deposition (thermal evaporation, sputtering), Wet and dry(plasma-based) etching, Device (CV) characterization, Design of Experiments, Statistical Process Control.

Software Skills: Python, C, C++, Emerson’s Pipeline Studio, Pipeline Manager, Visual Pipeline, MATLAB, Minitab, JMP, MS Office, K-Layout.