

# ENGINEER.

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## SHREYAS NAGARAJ

I am a 24-year-old from Bangalore, India. Currently pursuing my Masters of Science in Engineering Design-1st Year. For me, design means being able to give shape to people's unexpressed ideas. Being Indian is a matter of pride and I like to think that one day I will be able to contribute to keeping the values of Made in India alive.

## HOBBIES

Playing Chess, Football and Cricket

Reading Books, watching Science Fiction movies

Learning new languages

PORTFOLIO  
2023

# INNOVATE INVENT



+91-5822039257



State College, PA



sjn5603@psu.edu  
shreyasnag220699@gmail.com

# Education & Experiences.

## Educational Path

Pennsylvania State University, University

Masters of Science - Engineering Design

2023 - 2025

Dayananda Sagar College of Engineering

Bachelor of Engineering - Mechanical Engineering  
(7.99/10)

2017 - 2021

# Collaborations & Experiences.



Aug 2023 - Present

Product Designer for  
Bioprocess Vessels and  
Systems



Feb 2022 - Apr 2023

Product Designer for  
Bioprocess Vessels and  
Systems



July 2021 - Aug 2021

CAD Modelling of Drone  
Airfoil for VTOL Engine



Aug 2017 - May 2021

Under-grad Researcher &  
student at the Mechanical  
dept.



TATA ADVANCED SYSTEMS

Mar 2021 - Apr 2021

Product Development Intern  
& Assistant for developing  
concept to prototype.



June 2019 - July 2019

Internship to gain insights  
on Gas Turbine Engines &  
Manufacturing Processes

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# Skills.

An overview of my capabilities

## Soft Skills

- Creative
- Curious
- Adaptable
- Teamwork
- Communicative
- Extrovert
- Conflict Resolution
- Time Manager
- Critical thinking
- Negotiation
- Work Ethic
- Extrovert

## Software & Tools



Autodesk  
Inventor



Autodesk  
Fusion 360



SolidWorks



Autodesk  
Plant 3D



Autodesk  
Revit



Ansys



Autodesk  
AutoCAD



Autodesk  
NavisWorks



Autodesk  
3ds Max



Tableau



MS Office



Adobe  
Lightroom

## Programming



Python



C/C++



MatLab



R Studio

# The full system.

Bioreactors are designed to meet all process requirements for culture of mammalian cells for production of vaccines, biosimilars and other biopharmaceutical products.

In accordance with ASME Sec.VIII Div. 11 & ASME BPE & ASME Sec. IX

Designed for batch, fed batch and continuous mode of operation, system can be used as fully automated or semi-automated model.



# Raptor.

THROUGH  
THE EYES OF ANOTHER

This flying robot can be remotely controlled or flown autonomously using software-controlled flight plans in its embedded systems, that work in conjunction with onboard sensors and a global positioning system.

Working animation and analysis of the quadcopter was rendered

With this aerial vantage point I soar, the unseen, over the peaks and islands.

PORTFOLIO  
2023

FIRST  
SOLO  
FLIGHT

A FREEDOM  
BEYOND  
DREAMS



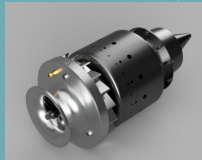
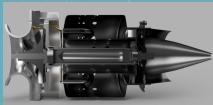
# Gas turbine engine.

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An internal-combustion engine employing a gas as the working fluid used to drive the turbine

This model considered the conceptual idea of replacing the reciprocating engines with a low emission, and high-performance gas turbine engine

A computer aided model and live animation of the parts of a turbine engine was made by referring to data from research papers and verified journals.



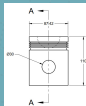
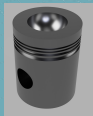
# Engine study.

Impact of Split and Re-Entrant Type Piston Bowl Geometry Fuelled with Pre Heated Diesel and Biodiesel on a Compression Ignition Engine Characteristics

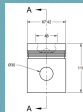
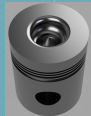
An investigation was carried out with biodiesel and and modifying Piston Bowl Geometry to assess the change in characteristics of the CI Engine.

The project results exhibited a drastic increase of 4% on engine working yield and a 3 % decrease in fuel consumption of and all emission characteristics for the Re-Entrant PBG.

Standard.



Re-Entrant.



Torroidal.

