Amaiya Khardenavis

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INTERESTS

Thermal and Fluid Sciences
Sustainable Energy Technologies
Propulsion Systems

EDUCATION

UNIVERSITY OF MUMBAI

B.E. in Mechanical Engineering
July 2018 | Mumbai, India
GPA: 8.36/10 | Class Rank: 10th/80

INTERMEDIATE/+2

May 2014 | Mumbai, India
HSC (Maharashtra) | 82/100

MATRICULATION

May 2012 | Mumbai, India
CBSE | 10/10 GPA

COURSEWORK

UNDERGRADUATE

Mechanical Utility Systems
Thermal and Fluid Power Engg.
Renewable Energy Sources
Finite Element Analysis
Refrigeration and Air Conditioning
Heat Transfer
Fluid Mechanics
Thermodynamics
Machine Design
Internal Combustion Engines

MOOC

Intro to Aeronautical Engineering
Energy and the Earth
Space Mission Design and Operations

SKILLS

AutoCAD
Solidworks
Autodesk Inventor
Ansys Mechanical APDL
Ansys Fluent
C++
Visual Basic
MATLAB
HTML

EXPERIENCE

DESE, IIT BOMBAY | Research Assistant

August 2018 – Present | Mumbai, India

- Working on an independent review of the ambitious Mumbai-Pune Hyperloop project being carried out by Virgin Hyperloop One in collaboration with Pune Metropolitan Development Authority (PMRDA).
- Supervisor: Dr. Rangan Banerjee

RAPID MANUFACTURING LAB, IIT BOMBAY | Project Intern

August 2017 – April 2018 | Mumbai, India

- Involved in the development of a Micro Aerial Vehicle using fused deposition modeling for plotting land terrain area maps from drone platforms using MeshLab.
- Supervisor: Dr. K.P Karunakaran

CRANFIELD UNIVERSITY | Visiting Researcher

June 2017- August 2017 | Bedfordshire, UK

- Carried out gas turbine performance optimization and simulation using Turbomatch (FORTRAN based software tool developed at Cranfield University) for the Rolls Royce WR-21 gas turbine engine.
- Supervisor: Dr. Suresh Sampath

GAS TURBINE RESEARCH ESTABLISHMENT | Summer Intern

June 2016 – July 2016 | Bangalore, India

- Project Titled "Mean Line Design Of Axial Gas Turbines" under the Turbine Group. Carried out design point calculations for gas turbines and blade profile generation.
- Supervisor: Mr. S.V Ramanamurthy 'Scientist G'

HEAT PUMP LAB, IIT BOMBAY | Winter Research Intern

December 2015 – January 2015 | Mumbai, India

- Worked on design and optimizing heat capture in order to generate distilled/potable water by carrying out desalination of brackish/seawater using waste heat from the condenser of an air-conditioning system.
- Supervisor: Dr. M.V Rane

PUBLICATIONS

- Design and Development of a Light Weight Quad-copter using Optimization Techniques, Proceedings of the International Conference on Frontiers in Engineering, Applied Sciences and Technology, NIT Trichy, India, April 2018, co-authored by K. Rakesh Kumar.

ACHIEVEMENTS

- Best Undergraduate Project Poster Presentation Award: 2018
- Best Undergraduate Thesis Award: 2018
- Winner at Inter-Collegiate Badminton Championships, KJSCE: 2016 & 2017
- 6th position at University of Mumbai Badminton Championships: 2016 & 2017
- Runner-Up at Inter-Collegiate Badminton Championships, VJTI: 2016
- Awarded INSPIRE Research Scholarship, Govt. Of India: 2014
- Among Top 1 Percentile in 12th Grade School Board: 2014