Rushit Virani

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Objective

I am an avid learner with versatile skills and a Bachelor of Technology (B.Tech.) focused in Mechanical Engineering from IIT Ropar. I am actively looking out for opportunities where I can use my analytical mindset and problem solving skills to solve complex and unstructured problems be it business or technical.

Professional Experience & Internships

Present June 2019	**Engineering Analyst at Timetooth Technologies Pvt Ltd** Product Development of Exoskeleton which includes tasks like developing logic for sensor fusion, defining the product specifications needed in an exoskeleton through research. Conceptualized and developed a logic for robust parameterized gait model for exoskeleton using MBD.
May-July 2018	**Microstructural characterization of machined stainless steel 316L using Electron Backscatter Diffraction Technique and its tribology behaviour.** Advisor: Dr. Shashank Shekhar, Associate Professor, IIT Kanpur, India. Stainless steel 316L machined at different parameters was characterized using EBSD technique(SEM) and its tribology behaviour was also studied using Ball-on-Disk wear testing machine. EBSD data was analysed using HKL software to characterize samples on the basis of different Grain boundary.
June-July 2016	**Industrial internship at Jyoti CNC Automation Ltd.** Advisor: Mr. Vincent Dhabi, Intern's Head, Jyoti CNC Ltd., Rajkot, Gujarat, India. The process of a product from its initial stages of development to its fabrication and final dispatch was studied and understood.

Education

2015 - 2019	B.Tech in Mechanical Engineering, IIT Ropar **CGPA: 8.02/10**.
2013 - 2015	Intermediate(12th Standard), Central Board of Secondary Education(**CBSE**) Board **Percentage-90%**.
2013	Matriculation(10th Standard), Indian Certificate for Secondary Education(**ICSE**) Board **Percentage-90%**.

Skills & Coursework

Languages	SQL, Python, HTML&CSS, Latex (documentation).
Software packages	Advanced Excel, Origin(Data processing tool), Altair Hyperworks, Solidworks, MATLAB.
Courses	Querying Data with Transact-SQL by Microsoft, Marketing Metrics, Financial Markets and Institutions, Online economy and digital marketing, International Economics and Finance, Product Design and Realization, Mechanics of Materials, Theory of Machines, Material Science & Engineering, Manufacturing with Non-Metallic Materials.

Achievements, Positions & Membership

- **Media Head** for the annual cultural fest of IIT Ropar, Zeitgeist 17. Co-ordinated with **MTV** and led the media team.
- Appointed as the **Secretary** of Society of Mechanical Engineers(SME) for the AY 2017-18.
- Member of the Editorial Team of College Magazine 'KSHITIJ', IIT Ropar for AY 2015-17.
- Member of **Event Management Team of 'Zeitgeist'**, annual cultural fest of IIT Ropar, Zeitgeist 16
- Elected as the **Batch Representative** of SME for the AY 2015-16. Active member of Society of Mechanical Engineers(SME), IIT Ropar. Attended various professional talks under SME.
- **Class representative** of 2015 Mechanical Batch for the AY 2017-18.
- Cracked IIT-JEE (Indian Institute of Technology Joint Entrance Exam) with All India Rank 4544 out of 1.3 million aspirants(**Percentile of 99.65%**).

Academic Projects

B.Tech Thesis

Microstructure and Mechanical Properties of Additively Manufactured Ti64 alloy via Direct Metal Laser Sintering for Medical Implants.
Advisor: Dr. Dhiraj Kumar Mahajan and Dr. Dheepa Srinivasan, IIT Ropar, India.
The aim of the project is to optimize DMLS process parameters using microstructural characterization of different specimens and studying their mechanical behaviour. Effect of heat treatment of this AM Ti64 will also be studied so the Ti64 can be successfully used as a medical implant.

Oct-Nov 2017

Heat transfer in nuclear systems
Advisor: Prof SK Das and Dr. Himanshu Tyagi, IIT Ropar , India.
Theoretical and Computational steady state analysis to find the 2D temperature distribution within a nuclear reactor using COMSOL and MATLAB.

May-July 2017

Influence of tool plunge depth on micro-structure, hardness and corrosion resistivity of Friction Stir Processed magnesium reinforced with hydroxyapatite fabricated for bio-implant applications. Advisor: Dr. Harpreet Singh, Professor, IIT Ropar, India.
The project aimed at finding the effect of varying tool plunge depth of FSP tool while friction stir processing magnesium reinforced with hydroxapatite. The parameters of FSP were successfully optimized in order to fabricate composite with enhanced hardness and corrosion resistivity so it can be used as a biodegradable implant.