



Thomas Routhu

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Address: via Francesco Orsi, 60, 27100, Pavia, Italy (Work)

● WORK EXPERIENCE

10/2022 – CURRENT Milan, Italy

WORKING STUDENT(THESIS COLLABORATION) REHOUSEIT

- Integrating Mechatronics in a 3D printing station of an innovative industrial line.
- Data Analysis to adjust the parameters with respect to the kinematic constraints of Cobot
- Optimizing the parameters and sensor data to get a smooth operation.
- Developed a Milling Station with 6 axis Universal Robot and optimized the performance.
- Post-processor customization to get error-free paths using Python and JavaScript.

01/2020 – 06/2020 GURGOAN, India

RESEARCH ASSOCIATE BML MUNJAL UNIVERSITY

- Two best suitable coatings for Super Duplex Stainless Steels tools and their impact on the tool life.
- Published a Research paper in an international journal

06/2018 – 09/2018 Hyderabad, India

DESIGN INTERN NATIONAL SMALL INDUSTRIES CORPORATION

- Using CAD/CAM built a prototype of Aerofoil model NACA 4412 with its analysis in ANSYS Using

● EDUCATION AND TRAINING

03/10/2020 – 30/09/2023 PAVIA, Italy

MASTER'S IN AUTOMATION, ROBOTICS AND MECHATRONICS University of Pavia

Final grade 105/110 | **Level in EQF** EQF level 7 | **Number of credits** 120 |

Thesis Automation of an Innovative Industrial line

03/2022 – 09/2022

MASTER'S IN INFORMATICS (ERASMUS+) Gdansk University of Technology

- Image Classification with Machine Learning Frameworks using Convolutional Neural Networks.

08/2016 – 07/2020 GURGOAN, India

BACHELORS OF TECHNOLOGY IN MECHANICAL ENGINEERING BML Munjal University

Thesis "Machinability evaluation of coated carbide inserts in turning of Super Duplex Stainless Steel"

● LANGUAGE SKILLS

Mother tongue(s): **TELUGU**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1
ITALIAN	A2	A2	A2	A2	A2
HINDI	C1	C1	C1	C1	C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● DIGITAL SKILLS

Python | Data analysis | MATLAB | Machine Learning. | Deep Learning, | C++ | Simulink | C | CAD&CAM | Arduino | Artificial Intelligence | Linux | Raspberry Pi | Fusion-360 | Agile Projectmanagement | LaTeX | Git

● ADDITIONAL INFORMATION

PROJECTS

Projects

- Image Classification with Machine Learning using Neural Networks.
- Obstacle Avoidance Using Computer Vision and Path Planning Algorithms on a Robot.
- Multi-sensor Data Analytics for Grinding Wheel Life Estimation with low cost.
- Home Automation, IoT, Arduino-based projects like Line Follower, Gestured controlled Robotic Arm.
- Modeled a portable Atmospheric water Generator prototype that generates water from the air.

ACADEMIC ACHEIVEMENTS

Published a Research paper on international journal

"Machinability and Evaluation of carbide inserts in turning of Super Duplex Stainless Steel"

Link <https://link.springer.com/article/10.1007/s42452-020-03570-9>

Merit Based Scholarship

Received a complete 100% Merit-based Scholarship for my Bachelor's at BML Munjal University in India

CERTIFICATIONS

Data Analysis Using Python by University of Pennsylvania

- Developed proficiency in data manipulation, cleaning, and preprocessing using Python libraries such as Pandas and NumPy, enabling efficient data wrangling and transformation.
- Applied statistical analysis and visualization techniques to extract meaningful insights from datasets, utilizing Python libraries.

02/2023 – 05/2023

Machine Learning Specialisation by Stanford University

- Developed practical skills through hands-on implementation of machine learning algorithms, including supervised learning, unsupervised learning, and deep learning.
- Applied machine learning concepts to real-world problems, gaining experience in data preprocessing, feature engineering, model evaluation, and deployment.

05/2023 – 07/2023

Deep Learning By Stanford University (online)

- Build and train deep neural networks, identify key architecture parameters, implement vectorized neural networks and deep learning to applications
- Train test sets, analyze variance for DL applications, use standard techniques and optimization algorithms, and build neural networks in TensorFlow

