



# Vibhor Pandhare

Graduate Researcher  
PhD Candidate, Mechanical Engineering  
University of Cincinnati, OH, USA

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**FOCUS** Industrial artificial intelligence and data analytics for sustainable resource management.

**EDUCATION** **University of Cincinnati (UC)**, Cincinnati, OH, U.S.A. *Aug. 2017 - Present*

- *Ph.D.* in Mechanical Engineering
- Advisor: Dr. Jay Lee

**Indian Institute of Technology Indore (IIT Indore)**, India *Jul. 2011 - Jun 2016*

- *5 Year B.Tech + M.Tech Dual Degree*
- Mechanical Engineering, specialization in Production and Industrial Engineering
- CGPA: 8.0/10.0
- Thesis Title: *A Social Network for Machines – Realizing INDUSTRY 4.0*
- Advisor: Dr. Bhupesh Kumar Lad

**EXPERIENCE** **Indian Institute of Technology Bombay (IIT Mumbai)**, India *Jul. 2016 – Jul. 2017*

*Research Associate*, National Center for Aerospace Innovation and Research

- Developed physics-based models for reliability estimation for naval equipment.
- Considered Data availability from perfect time to failure data to expert judgement
- Supervisor: Dr. Makarand Kulkarni

**AVTEC Ltd.**, Pithampur, Madhya Pradesh, India *Oct. 2015 – Mar. 2016*

*Graduate Intern*

- Implementation and Validation of a Machine Simulator: A Case Study

**Piaggio Vehicles Pvt. Ltd.**, Baramati, Maharashtra, India *May. 2014 – Jun. 2014*

*Summer Intern*

- Complete Process Analysis of Supply Input and Supply Quality Control
- Application of KANBAN System on 4-Wheeler Assembly Line

**Tata Motors Pvt. Ltd.**, Pune, Maharashtra, India *May. 2013 – Jun. 2013*

*Summer Intern*

- Designing of Fixtures for Automation of Manufacturing Processes in Gear Factory

**Geekware**, IIT Indore, India *Jan. 2014 – Dec. 2015*

*Co-founder*

- A student-driven virtual market for goods and services for IIT Indore community



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**RESEARCH  
EXPERIENCE**

- Mazak Corporation**, Florence, KY, U.S.A. *Oct. 2017 – Present*  
Design and Development of a Predictive Health Monitoring System Prototype for Mazak VTC800 Machine
- IIT Indore - IEDC**, Govt. of India, India *Mar. 2015 – Mar. 2016*  
A Smart Communication Network for Shop-floor Planning in Industries
- IIT Indore - IEDC**, Govt. of India, India *Mar. 2014 – Mar. 2015*  
Design and Development of a Smart Manager Android App for Industries

**AWARDS &  
HONORS**

- *Innovative Student Projects Award*, Indian National Academy of Engineering, 2016
- *Manufacturing Today Awards*, National Technical Institutes Competition, India, 2016
- *Senate Member*, Alumni representative, Indian Institute of Technology Indore, 2016
- *Best All-Rounder Award*, Indian Institute of Technology Indore, India, 2016
- *Academic Excellence In M.Tech*, Indian Institute of Technology Indore, India, 2016
- *Delegate, Smart Manufacturing Summit*, Confederation of Indian Industry, 2015
- *Delegate, Start-Up India Policy Launch* by the Prime Minister of India, 2016
- *Delegate, India International Science Festival*, IIT Delhi, New Delhi, India, 2015

**PUBLICATIONS**

- Method and System for Providing Smart Communications For Distributed Operations Planning In An Industrial Network, B. K. Lad, M. S. Kulkarni, **V. S. Pandhare**, N. Agrawal, K. Upasani, M. Bakshi, 2016  
Indian Patent Application No. 201621007003 (Filed)
- Upasani K., Bakshi M., **Pandhare V. S.**, Lad B. K., Distributed Maintenance Planning for Industry 4.0, Computers and Industrial Engineering, Vol. 8, Jun. 2017, pp. 1-14
- Upasani K., Bakshi M., **Pandhare V. S.**, Lad B. K., Memetic Algorithm to Optimize Preventive Maintenance Schedule for a Multi-component Machine, International Journal of Performability Engineering, Vol. 12, No. 2, Mar. 2016, pp. 183-95.
- **Pandhare V. S.**, Sankhla V. K., Lad B. K., Design and Development of a Machine Simulator for Cyber-Physical Systems Based Operations Planning, Proceedings of the 57th National Convention of IIIE, SVNIT, India, Nov. 2015, pp.807-812.
- Agrawal N., **Pandhare V. S.**, Lad B. K., 'A Bayesian Algorithm for Cyber-Physical System Realization for Industry 4.0,' 3rd International Conference on Business Analytics and Intelligence, Data Centre & Analytics Lab, IIM Bangalore, India, 2015

**COMPUTER  
SKILLS**

MATLAB, Python, MySQL, R, Java