# MANIE KANSAL

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# SNAPSHOT

* A budding professional interested in challenging opportunities in the field of  
  technical research and development.
* Possess 10+ years of experience in technical field including electronics, artificial intelligence and robotics and automation.
* Possess great co-ordination and analytical skills, time management in organization and operations. Ready to manage applications in a fast paced environment.

# WORK EXPERIENCE

* Associated with online platforms (part time) as Technical Trainer to train the international students online on programming languages, mobile app development and robotics and automation
* Worked at Technoplanet Lab Pvt. Ltd. (associated with Manav Rachna International University) as a STEM EDUCATOR to train the students on multidisciplinary engineering concepts (April 2019 to April 2020).
* Previously associated with teaching (both technical and non technical) at online platform at Unacademy, Chegg Tutorials.
* Technical Instructor at Early Engineers Pvt. Ltd. to train the children on game designing skills using softwares like Scratch; Mobile app inventor, Lego Robotics, Wedo, Arduino, Civil and aerospace engineering experiments. (April, 2018 – June, 2018)
* Assistant Professor at Lovely Professional University, Punjab in Electronics and Communication Department (July 2011 to April 2017).
* Job Summary:
* Delivered technical courses on electronics and electrical engineering, designed different courses along with their Instruction Plans and syllabi, question papers, examination etc.
* Mentored students on several capstone projects and dissertations on different topics.
* Worked as DAA (Division of Academic Affairs) nominee, admission runner and taken other various responsibilities in the University.

# PROFESSIONAL CERTIFICATIONS

* Completed an online course on Machine Learning Specialization on Coursera(Stanford University), April 2023.

It further includes three courses:

* Supervised Machine Learning
* Advanced learning algorithms
* Unsupervised Learning

Under this specialization, I studied and analysed modern machine learning  
concepts, including supervised learning (linear regression, logistic  
regression, neural networks, decision trees), unsupervised learning  
(clustering, anomaly detection), recommender systems, and  
reinforcement learning. I also learned some of the best practices for  
building machine learning models. I’ve also gained practical skills to  
apply machine learning techniques to challenging real-world problems.

# TECHNICAL SKILLS

* Python, SQL, Power BI, Tableau, Arduino, HTML & CSS, MATLAB, TINA, orcad, Pspice, Logix Pro, PLC.
* Semiconductor Devices and Circuits
* Digital Signal Processing
* Industrial Automation and Experiential Learning
* Artificial Intelligence including Fuzzy Logic and Neural Networks

# PUBLICATIONS

* Research paper published on “Combined Classifier for Plant Classification and Identification from Leaf Image based on Visual Attributes”- International Conference on “Intelligent Circuits and Systems ICICS 2018” , held at Lovely Professional University, Phagwara, Punjab (India) on 20-21 April 2018.
* Research paper published on “Improved Image Watermarking using DWT with Predictive Coding for Hiding Encrypted Watermark”- International Journal of Advanced Computational Engineering and Networking, ISSN: 2320-2106, Volume-5, Issue-9, Sep.-2017.
* Research paper published on “DWT, DCT and SVD based Digital Image Watermarking”, --International Conference on Intelligent Circuits and Systems (ICICS- 2016)  at LPU on November 18-19th, 2016.
* Research paper published on “DWT, DCT and SVD based Improved Digital Image Watermarking”, at TURING100 – International Conference on Computing Sciences (ICCS) explored in IEEE held at Lovely Professional University (14-15 September, 2012).
* Research paper published on “A User Friendly GUI Based Benchmark for Image Watermarking" at TURING100”– International Conference on Computing Sciences (ICCS) explored in IEEE explore held at Lovely Professional University (14-15 September, 2012).
* Research paper published on, “DCT and Thresholding based Digital Video Watermarking”, in International Journal of Applied Information Systems 2(6):9-12, May 2012, published by Foundation of Computer Science, New York, USA.
* Review paper published on “Digital Image Watermarking Techniques” in National Conference on “Impact Of Management and Technological Advancements In Technical Education and Industrial Sector” at “Jasdev Singh Sandhu Institute of Engineering and technology(JSSIET), Kauli, Patiala”.
* Published two chapters in the book of “Digital Electronics by GS Kalra”, 2012.
* Guided the students to work on “Networking Routing Protocols” and they published a paper on “Enhanced Comparative Study of Networking Routing Protocols ” in International Journal of Advanced Research in Computer Science and Software Engineering, 2014, IJARCSSE.

# PROJECTS AND DISSERTATIONS SUPERVISED

**Supervised 7 dissertations students as a mentor to guide them for their research work.**

* DCT and thresholding based Video Watermarking.
* Robust Digital Image Watermarking Invariant to various Geometric and Noise Attacks.
* Improved image watermarking using DWT with predictive coding for hiding the encrypted watermark
* Plant identification from leaf image using image descriptors.
* Analysis of Papaya on the basis of its Physical Characteristics using MATLAB.
* Comparative Analysis of Error Correcting Codes.
* Comparison of different Benchmarks and implementation of New Benchmark for Image Watermarking.

**Capstone Projects Supervised**

* Various automated software and hardware projects based on artificial intelligence and robotics and automation.
* Self Balancing Segway using Arduino and Gyroscope
* Voice Controlled Home Automation using Android Application
* Wireless Controlled Flexible Hexapod
* Smart Classroom System based on Raspberry Pi
* Image De-noising using MATLAB
* Gesture Recognition through Image Processing
* Image Processing based Robot
* Image Compression using MATLAB.

# PROJECTS AND TRAININGS UNDERTAKEN

* M.Tech Dissertation on DWT, DCT and SVD based Digital Image Watermarking using MATLAB. In this dissertation I have done research in the field of Digital Image Watermarking using different algorithms and techniques in order to enhance the existing results.
* Capstone Project on FPGA based Controller Area Network in Automobiles (CAN) in VIII semester. In this project, I along with my team members had simulated the designed conditions of CAN in Automobiles based on different priorities.
* Capstone Project on Microstrip Antenna in VII semester. In this project, I along with my team members had calculated the designing conditions for the Microstrip Antenna.
* 2 days Robotics Workshop by itrix(Bombay). In this workshop I along with my team members made a Line Following Robot.
* 6 weeks industrial training on Embedded System held at LPU. In this training I made Digital Clock.
* 15 days PCB designing training at LPU. I made 5V power supply in this training.

# ACADEMIC QUALIFICATION

**Professional Qualification**

# B.Tech- M.Tech. in Electronics & Communication Engineering from Lovely Professional University, Jalandhar(Punjab), with 9.33 Cgpa, 2011.

**Primary and Secondary Qualification**

Secured 70% marks in 12th std. in C.B.S.E, 2006.

Secured 83% marks in 10th std. in C.B.S.E, 2004.

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# AWARDS

* Honoured with Teaching Excellence Award at LPU, 2015.
* Five years Teaching Excellence Award at LPU, 2016.
* Awarded with the Scholarship during M.Tech for the Academic Distinction
* Participated and won various technical and non technical competitions at University fests and events.
* Silver medallist in IAYP(International Award For Young People).